



## SOME FISHES OF THE ORDER AMPHIPRIONIFORMES.

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(Plates XXVII-XXVIII, Text-figures 1-4.)

ON my return journey to Sydney from a collecting trip to the Great Barrier Reef last October, arrangements were made whereby I might work at the Queensland Museum, Brisbane, for a fortnight, thus being enabled to examine a number of type specimens of fishes. I am indebted to Mr. H. A. Longman, Director of the Museum, and Mr. T. C. Marshall for many courtesies and for facilities afforded.

My studies on the Pomacentrid fishes and their allies, based on the describing and figuring done at the Queensland Museum and later elaborated and extended in the Australian Museum, form the subject of this paper, which includes descriptive and taxonomic notes of some Australian and South Pacific species with figures of typical or topotypical specimens, and concludes with a synonymic check-list of the Australian species with indications of their distribution. The range of species outside Australia is not dealt with, as confusion would result from the inclusion of extralimital localities, many of which may be based on doubtful records and identifications of other authors. Type-localities have, however, been quoted, and, except where noted otherwise, all references to literature have been checked with the original books and papers.

### Order AMPHIPRIONIFORMES mihi.

*Pomacentroidei* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, pp. 1-166.

*Pomacentriformes* Regan, Ann. Mag. Nat. Hist. (8) xii, July 1913, p. 131.

*Chromides* Jordan, Classif. Fishes 1923, p. 218.

The fishes of the order Amphiprioniformes may easily be recognised from Bleeker's succinct definition:—"Bony, acanthopterygian fishes with simple nostrils, the presence of a single nasal opening on each side sufficing to distinguish all the members from the other acanthopterygians."

The markedly serrated operculum and, in many species, the bold bands on the head and body, separate the Amphiprionidæ from the Pomacentridæ and their allies. Barnard<sup>1</sup> has used the term Amphiprionidæ to include the Pomacentridæ of authors, rightly pointing out that *Amphiprion* is an older generic name than *Pomacentrus*, but I propose to restrict the family Pomacentridæ to *Pomacentrus* and its allies (Pomacentrinæ, Parminæ, and Glyphisodontinæ in Australian waters). To have been consistent, some ichthyologists should have used the name Abudefdufidæ.

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<sup>1</sup> Barnard, Ann. S. Afr. Mus. xxi, 2, Oct. 1927, p. 728. The term Amphiprioninæ was used by Gill, Proc. Acad. Nat. Sci. Philad. 1859 (1860), p. 148.

The family Amphiprionidæ, as here understood, includes three closely allied genera: *Amphiprion* (logotype, *Lutjanus ephippium*), *Actinicola* (orthotype, *Lutjanus percula*), and *Phalcrebus*, gen. nov. (orthotype, *Amphiprion akallopisos* Bleeker). The forms with conical or non-compressed teeth and less than 50 transverse series of scales on the body enter the family Chromidæ.

*Premnus* may be regarded as belonging to a separate family, the Premnidæ, near the Amphiprionidæ. *Cheiloprion*, *Hemiglyphidodon*, and *Stegastes* are also each probably worthy of family separation, to say nothing of several American genera.

Although the order Amphiprioniformes is easily separable from other orders of fishes, it is perhaps not very ancient, and most of the known genera appear to be emergent forms. Several fossils have been assigned to the "Pomacentridæ," but none of them appears to enter the order as now understood.

*Priscacara* Cope<sup>2</sup> from the Tertiary of the United States was at first compared with the Pomacentridæ but Haseman<sup>3</sup> regarded it as "an ancestral Cichlid," and Jordan<sup>4</sup> accords it family rank. I have not seen the description of *Chromis savornini*,<sup>5</sup> classed with the Pomacentridæ in the Zoological Record.

*Odonteus* Agassiz<sup>6</sup> was regarded as separable from the Sparoides and classed with the Scienoides by its author, who remarked on its approach to *Heliases*. *O. sparoides*, the only species, is described as having large, well separated, conical teeth, first two dorsal spines subequal and less than half length of third, spinous dorsal high, body deep with a shallow caudal peduncle; these features show that *Odonteus* is separable from the Amphiprioniformes.

#### ARTIFICIAL KEY TO AUSTRALIAN AND SOUTH PACIFIC GENERA.<sup>7</sup>

- A. Fifty or more transverse series of scales. D.ix-xi. Bases of spinous and soft dorsals of about equal length. All opercles serrated.
- B. Suborbital without a strong spine. AMPHIPRIONIDÆ.
- C. Dorsals connected but notched. Occipital region naked. Caudal rounded .. ..  
*Actinicola* Fowler 1904.
- CC. Dorsals without notch. Occipital region scaly. Caudal truncate or excavate.
- D. Less than 18 dorsal rays. At least one transverse band .. ..  
*Amphiprion* Bloch & Schneider 1801.

<sup>2</sup> Cope, Bull. U.S. Geol. Surv. Terr. iii, 1877, p. 816, and Vertebrata Tert. Format. i, 1883, pp. 92 *et seq.*

<sup>3</sup> Haseman, Bull. Amer. Mus. Nat. Hist. xxxi, 1912, pp. 97-101.

<sup>4</sup> Jordan, Classif. Fishes (Stanford University Publications, Biol. Sci. iii, 2), 1923, p. 218.

<sup>5</sup> Arambourg, Nat. carte géol. Algèr. (1) vi, 1927, p. 162, pl. xvi, fig. 4, and pl. xvii, fig. 3.

<sup>6</sup> Agassiz, Recherches poiss. foss. iv, 1839, p. 178. Not *Odontæus* Klug, Abhandl. Berl. Akad. 1843, p. 37 (*vide* Gemminger & Harold, Cat. Coleopt. iii, 1868, p. 1080), a genus of Coleoptera.

<sup>7</sup> Extralimital genera not dealt with here, but included in the order, are: *Stegastes* Jenyns 1842, s.str.; *Furcaria* Poy 1860, procc. = *Demoisellea* Whitley 1928; *Hypsipops* Gill 1861; *Microspathodon* Günther 1862; *Euschistodus* Gill 1862; *Pomataprion* Gill 1863; *Ayresia* Cooper 1864; *Onychognathus* Troschel 1866, procc. = *Agripopa* Whitley 1928; *Hermosilla* Jenkins & Evermann 1888; *Nexilaris* Jordan & Evermann 1896; *Azurina* Jordan & Evermann 1898; *Nexilosus* Heller & Snodgrass 1903; *Azurella* Jordan 1919; *Centrochromis* Norman 1922; and *Plectroglyphidodon* Fowler & Ball 1925. Many of these may subsequently be removed to families or subfamilies distinct from the Pomacentridæ. *Zabulon* Whitley 1928 should be removed from the order on account of its three anal spines and superiorly situated lateral line.

- DD. More than 18 dorsal rays. No transverse bands .. *Phalerebus*, gen. nov.
- BB. Suborbital with a strong spine directed backwards. PREMNIIDÆ *Premnas* Cuvier 1816.
- AA. Less than 50 transverse series of scales. D.xii or more (rarely xi). Base of spinous dorsal much longer than that of soft.
- E. Teeth conical, villiform, or subcylindrical; not compressed. CHROMIDÆ.
- F. Teeth subcylindrical .. .. . *Mccoenichthys* gen. nov.
- FF. Teeth conical or pointed, sometimes in bands.
- G. None of the opercles serrated.
- H. External teeth of mandible directed outwards .. *Hoplochromis* Fowler 1918.
- HH. External teeth of mandible not directed outwards.
- I. Second anal spine nearly as long as head .. *Dorychromis* Fowler & Bean 1928.
- II. Second anal spine slightly more than half length of head.
- J. Each scale of body with 1 to 3 small basal auxiliary scales .. .. .  
*Lepidochromis* Fowler & Bean 1928.
- JJ. Body-scales without basal auxiliary scales .. .. .  
*Chromis* Cuvier 1814 (syn. *Heliases* C. & V. 1830).
- GG. Preoperculum, and sometimes suborbital, serrated.
- K. D.xii-xiii.
- L. Ground colour white with 3 dark transverse bands, strongly contrasted .. ..  
*Tetradrachnum* Cantor 1849 (syn. *Dascyllus* Cuv. 1829 & *Pirene* Gistel 1848).
- LL. Colour fairly uniformly dark or dusky without strongly contrasted bands .. ..  
*Pellochromis* Fowler & Bean 1928.
- KK. D.xvii *Acanthochromis* Gill 1863 (syn. *Heptadecacanthus* Alleyne & Macleay 1877).
- EE. Teeth more or less compressed, at least anteriorly. POMACENTRIDÆ.
- M. Lips normal. POMACENTRIDÆ.
- N. Preoperculum serrated.
- O. Spinous portion of dorsal and anal naked. Suboperculum and interoperculum serrated .. .. . *Daya* Bleeker 1877.
- OO. Spinous portion of dorsal and anal scaly. Suboperculum and interoperculum entire.
- P. Thirteen (rarely 14) dorsal spines.
- Q. Teeth in jaws biserial.
- R. Snout scaly.
- S. External teeth in jaws truncate. Caudal forked .. .. .  
*Pomacentrus* Lacépède 1802 (syn. *Pristotis* Rüppell 1838).
- SS. External teeth in jaws with somewhat rounded tips. Caudal lunate .. ..  
*Pseudopomacentrus* Bleeker 1877.
- RR. Snout naked .. .. . *Dischistodus* Gill 1863.
- QQ. Teeth in jaws uniserial.
- T. Snout scaly. Membrane of spinous dorsal incised and lobed. Caudal acutely lobed .. .. . *Parapomacentrus* Bleeker 1877.
- TT. Snout without scales. Membrane of spinous dorsal neither incised nor lobed. Caudal emarginate .. .. *Amblypomacentrus* Bleeker 1877.
- PP. Twelve (rarely 11) dorsal spines.
- U. Less than 30 transverse rows of scales.
- V. Membrane of spinous dorsal deeply incised *Brachypomacentrus* Bleeker 1877.
- VV. Membrane of spinous dorsal neither incised nor lobed .. .. .  
*Eupomacentrus* Bleeker 1877.

- UU. More than 30 transverse series of scales .. *Lepidozygus* Günther 1826.
- NN. Preoperculum smooth.
- W. Gill-rakers less than 40. GLYPHISODONTINÆ.
- X. Generally 30 or less transverse series of scales. Unpaired fins with small scales which do not form dense sheaths.
- Y. Orbicular or deeply ovoid; transverse bands dark, usually more than two in number.
- Z. Oblong-oval; 3-4 rows of scales above end of upper section of lateral line; 5-7 dark transverse bands .. .. *Glyphisodon* Lacépède 1802.
- ZZ. Orbicular; 1-2 rows of scales above end of upper section of lateral line. Transverse bands usually ill-defined or absent .. .. *Amblyglyphidodon* Bleeker 1877.
- YY. Ovate, ovate-oblong, or oblong; sometimes with one dark or several white transverse bands.
- A'. Oblong; 2 or 3 rows of scales above end of lateral line; anal base shorter than soft dorsal base .. .. *Negostegastes*, gen. nov.
- AA'. Oval to ovate-oblong; 1 to 2 rows of scales above end of lateral line;
- B'. Body ovate-oblong.
- C'. All pharyngeal teeth pointed .. *Glyphidodontops* Bleeker 1877.
- CC'. Pharyngeal teeth in part obtuse .. .. *Ireduleichthys* Whitley 1928 (syn. *Chrysiptera* Swainson 1839).
- BB'. Body oval .. .. *Paraglyphidodon* Bleeker 1876
- XX. Generally more than 30 transverse series of scales. Unpaired fins with dense scaly sheaths. PARMINÆ.
- D'. Base of soft dorsal about half length of base of spinous dorsal .. .. *Parma* Günther 1862.
- DD'. Base of soft dorsal about one-third length of base of spinous dorsal .. .. *Actinochromis* Bleeker 1877.
- WW. Gill-rakers 70 to 80. HEMIGLYPHIDODONTINÆ .. .. *Hemiglyphidodon* Bleeker 1877 (syn. *Ctenoglyphidodon* Fowler 1918).
- MM. Lips greatly thickened, fimbriate, and curled back over the snout. CHEILOPRIONINÆ *Cheiloprion* Weber 1913.

### Family AMPHIPRIONIDÆ.

#### *Amphiprion papuensis* Macleay.

(Plate XXVII, fig. 1.)

*Amphiprion papuensis* Macleay, Proc. Linn. Soc. N. S. Wales viii. 2. July 1883, p. 271. D'Entrecasteaux Group, New Guinea (Goldie, coll.). Type in Austr. Mus., Sydney. *Id.* Jordan & Seale, Bull. U. S. Bur. Fish. xxv, 1905 (1906), p. 279. *Ex* Macleay. *Id.* McCulloch & Whitley, Mem. Qld. Mus. viii, 2, 1925, p. 166 (Queensland). *Id.* Whitley, Rec. Austr. Mus. xvi, 4, 1928, p. 218, pl. xvii, fig. 2. *Id.* Iredale & Whitley, Austr. Mus. Mag. iii, 7, 1928, p. 251, & fig.

*Original description.*—"D.10/14. A.2/12. L.lat.50. The height of the body is one-half of the length including the caudal fin. The colour is black, the muzzle and breast, as far as the root of the ventrals are yellowish, the soft dorsal, tail, and caudal fin are white, and there are two broad cross bands, as in *A. bicinctus*, one from the nape to the edge of the sub-operculum, the other across the body, from the back part of the spinous dorsal to the vent."

"Beeua" of the natives. D'Entrecasteaux Group.

*Re-description of Holotype.*—D.x/16; A.ii/13 (under microscope); P.18 V.i/5; C.13; Sc.50; L.tr.7/1/20; L.lat. 36 tubes.

Head (20 mm.) 3.4 in length to hypural joint (69). Depth (34.5) 2 in same. Eye (6) 3.3, interorbital (7) 2.9, and longest pectoral ray (17) 1.1 in head.

Profile of head unevenly rounded, fairly steep, gibbous before eyes. Dorsal profile more strongly arched than ventral. Head considerably higher than long and longer than broad. Preorbital notched with several small spines and one larger one pointing downward over the maxillary. Suborbital margin armed with spines of different sizes. Preopercular margin with 28 serrations. Operculum with three groups of large spines (5 + 8 + 14); suboperculum with a similar group of 9 spines. Front of head, mouth, and chin naked; rest of head scaly. Irregular raised ridges on preorbital, suborbital, and on lower preopercular limb. About 21 predorsal scales. Interorbital broad, plano-convex. Jaws subequal. A single series of blunt, slightly curved, conical teeth in each jaw. Tongue fleshy, with a rounded margin. Palatal velum present.

Body elevated, strongly compressed, widest anteriorly, entirely covered with small, regular, ctenoid scales, which extend a short way on to the membranes of all the fins except the ventrals. The lateral line rises sharply anteriorly, following the dorsal curvature to below the posterior portion of the soft dorsal, and bears 36 tubes. There are a few punctured scales on the sides and caudal peduncle.

Dorsal originating slightly behind the vertical of the operculum. Spinous portion with a convex outline; dorsal rays gradually increasing in height backwards to form a somewhat pointed lobe which does not reach the vertical of the hypural joint. Anal similar in form to soft dorsal but with a longer base and its lobe not reaching so far back as that of the dorsal. The anal terminates slightly in advance of the last dorsal ray. Pectorals and ventrals broad, rounded. Caudal margin concave; the lobes were probably pointed, but the tips of the rays have been broken off.

*Colour.*—After long preservation in alcohol, the general body-colour is chocolate brown (perhaps blackish in life), becoming much lighter on the breast and face. Caudal peduncle and fin yellowish (perhaps white in life). A broad pearly band extends from the occiput to the suborbital, crossing part of the preoperculum and operculum, and meeting its fellow on the other side on the nape. A similar but broader band crosses the body from the dorsal notch to the vent, missing the anal fin, but entirely encircling the fish, and not bent backwards to include the edge of the soft dorsal. Anal, spinous dorsal and ventrals, blackish brown. Soft dorsal, caudal, and pectorals yellowish.

Described and figured from the holotype of *Amphiprion papuensis* Macleay, a specimen 69 mm. in standard length. Originally in the Macleay Museum, University of Sydney, and labelled "Amphiprion Papuensis, n. sp." in Macleay's handwriting, it was presented by the Committee of Management of the Macleay Museum to the Australian Museum in 1907; Regd. No. I. 9240.

*Variation.*—In two Queensland specimens, the width of the body-band where it crosses the lateral line is equal to the distance from the posterior border of the eye to the tip of the snout. In the type, the band is narrower. The anal fin is black with white tips to the rays in one specimen, but has a tendency to become light brown posteriorly in the other. D.x-xi/16.

*Larva*.—I have already described and figured a larval specimen, 8.8 mm. long, from Queensland (*loc. cit.*, 1928).

*Localities and Distribution*.—D'Entrecasteaux Islands, off south-eastern Papua (Andrew Goldie); holotype. Port Denison, Queensland (E. H. Rainford); 2 specimens. Holbourne Island, Queensland (E. H. Rainford); larva. Bowen, Queensland (E. H. Rainford); 2 specimens in the Queensland Museum.

*Affinities*.—*Amphiprion papuensis* appears to be a "good" species, but is evidently closely allied to several others from the Indo-Pacific region. The colouration of the fins, width of the bands, concave caudal margin, and scale-counts are diagnostic characters.

Bory de Saint-Vincent<sup>8</sup> figured a small West Australian *Amphiprion* as *Sparus milii* which resembles *A. papuensis* but has broader stripes and a dark soft dorsal. Thiollière<sup>9</sup> has doubtfully recorded this species from Woodlark Island which is near the D'Entrecasteaux Group, and his remarks, based on a drawing, may refer to *A. papuensis*.

The following nominal species may be grouped with *A. papuensis*, as they are evidently closely related to it, but further data regarding their variation are desirable before discussion as to their validity can be entered into:—*Amphiprion bicinctus* Rüppell,<sup>10</sup> *A. chrysogaster* C. & V.,<sup>11</sup> *A. xanthurus* C. & V.,<sup>12</sup> *Anthias clarkii*, Bennett,<sup>13</sup> *Amphiprion japonicus* Temminck & Schlegel,<sup>14</sup> *A. chrysargyrus* Richardson,<sup>15</sup> and *A. melanostolus* Richardson.<sup>16</sup> *Amphiprion boholensis* Cartier<sup>17</sup> and *A. snyderi* Ishikawa<sup>18</sup> are also probably allied to *A. papuensis*. If colour differences prove too variable for use as diagnostic characters, it may be possible eventually to sort out the "good" species from the invalid ones by studying geographical distribution of the various forms. The tendency of modern writers, however, has been to "lump" species described from widely separated localities as synonyms of one well-known species, but later separation may prove necessary. Fowler & Bean<sup>19</sup> in their admirable work on the Philippine forms have united most of the species of *Amphiprion* mentioned above with *A. polymnus*.

*Amphiprion papuensis* is closely allied to the species well figured as *Amphiprion polymnus* by Jordan & Seale<sup>20</sup> but the body-band is broader and there

<sup>8</sup> Bory de Saint-Vincent, *Diet. Classique d'Hist. Nat.* xvii, 1831, p. 130, pl. cxiii, fig. 2. Shark's Bay, West Australia. (Not Mauritius as stated by Cuv. & Val., *Hist. Nat. Poiss.* v, July 1830, p. 402, who confuse this species with *Sparus mylio* Lacépède.)

<sup>9</sup> Thiollière, *Ichthyologie in Montrouzier, Essai Faun. Île Woodlark, 1857* (*ex Ann. Soc. Imp. Hist. Nat. Lyon*, 1856), p. 198.

<sup>10</sup> Rüppell, *Atlas zu Rüppell, Reise (Senckenb. Nat. Ges.), Fische, 1830-1831*, p. 139, pl. xxxv, fig. 1. Tor & Massowah, Red Sea.

<sup>11</sup> Cuv. & Val., *Hist. Nat. Poiss.* v, July 1830, p. 400. Bourbon.

<sup>12</sup> Cuv. & Val., *Hist. Nat. Poiss.* v, July 1830, p. 402. No loc. = East Indies.

<sup>13</sup> Bennett, *Fish. Ceylon, 1830*, pl. xxix. Ceylon.

<sup>14</sup> Temminck & Schlegel, *Faun. Japon. Poiss.*, 1843, p. 66. Japan.

<sup>15</sup> Richardson, *Rept. 15th meet. Brit. Assn. Adv. Sci. 1845* (1846), p. 254. China.

<sup>16</sup> Richardson, *Ann. Mag. Nat. Hist.* ix, July 1, 1842, p. 390. Depuch I., W. Austr.

<sup>17</sup> Cartier, *Verh. Ges. Würzb.*, 1873, p. 96. Bohol, Philippines.

<sup>18</sup> Ishikawa, *Proc. Tokyo Mus.* i, 1904, p. 11, pl. v. Japan.

<sup>19</sup> Fowler & Bean, *Bull. U. S. Nat. Mus.* 100, vii, 1928, p. 6.

<sup>20</sup> Jordan & Seale, *Proc. Davenport Acad. Sci.*, x, 1905, p. 13, pl. vii. Hong Kong.

are fewer scales. The Chinese fish has light ventrals and anal, but these fins are dark in *A. papuensis*; again the dorsal fin of the former is light whereas in the latter it is dark. Bloch's figure<sup>21</sup> of *Anthias polymnus* shows a white band round the caudal peduncle, probably a juvenile character which disappears with age; it has also dark fins and a rounded caudal. Linnæus' original description of *Perca polymna*<sup>22</sup> does not enable me to state with certainty whether Bloch's and Jordan & Seale's identifications are correct, but Linnæus' "fasciis 3 albis" exclude *Amphiprion papuensis* from consideration.

Bleeker<sup>23</sup> has figured two specimens of so-called *Prochilus polymnus*. His figure 8 seems to represent the true *A. polymnus* but figure 7 approximates *A. papuensis*, but it shows a dark soft dorsal and larger scales. He later<sup>24</sup> recognised four varieties of this species, but the names he uses for them may have to be restricted further when more is known of the geographical races or varieties of this and allied species.

#### *Amphiprion mccullochi* sp. nov.

*Amphiprion melanopus* Ogilby, Austr. Mus. Mem. ii, 1889, p. 64. *Id.* Waite, Rec. Austr. Mus. v, 1904, pp. 168 & 208. Lord Howe Island. Not *A. melanopus* Bleeker, Nat. Tijdschr. Ned. Ind. iii, 1852, p. 561. Amboina.

*Amphiprion* McCulloch, Austr. Mus. Mag. i, 1921, p. 34 (habits).

D.x/15-18; A.ii/13-16.

Dorsal, pectoral, ventral, and anal fins black; caudal whitish. Caudal fin more or less emarginate, the lobes sometimes pointed. In a large series of specimens, one young one (Austr. Mus. No. I. 5392) has the caudal black like the other fins, whilst another (I. 5730) has lighter pectorals, but these are exceptional. Opercular band not nearly reaching the top of the nape, except in very young specimens: it is sometimes absent in adults. A vertical band across the middle of the body, and another one across the caudal peduncle in the young.

In *Amphiprion melanopus* Bleeker, with which *A. mccullochi* has been confused, the dorsal is yellowish, not black, and the opercular band extends to the top of the nape. When Ogilby, and later Waite, recorded this species from Lord Howe Island, they noted several differences between it and typical *A. melanopus* but did not propose an alternative name. *Amphiprion mccullochi* has been brought alive from Lord Howe Island to Sydney and may be seen in the Taronga Park Aquarium.

The holotype of *Amphiprion mccullochi* is an Australian Museum specimen, 78 mm. in length to the end of the middle caudal rays; Regd. No. Ia. 1962. It was collected at Lord Howe Island by my late senior colleague, Allan Riverstone McCulloch, to whose memory I dedicate the species.

#### *Actinicola percula* (Lacépède).

"*Tetragonopterus cinereus levis*," &c., Klein, Mis. Pisc. iv, 1749, p. 38, No. 5, pl. xi. fig. 8 (*vide* Bloch, 1797). Pre-Linnean.

<sup>21</sup> Bloch, Nat. Ausl. Fische vi, 1792, p. 103 (*vide* Sherborn, Index Animalium): Ichthyologie, ix, 1797, p. 89, pl. cccxvi, fig. 1. East Indies.

<sup>22</sup> Linnæus, Syst. Nat., ed. 10, 1758, p. 291, No. 8. Indies. *Idem.*, Gmelin, *ibid.* ed. 13, i, 3, 1789, p. 1313.

<sup>23</sup> Bleeker, Atl. Ichth. ix, 1877, pl. eccc, figs. 7-8.

<sup>24</sup> Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 28.

- "*Chaetodon macrolepidotus*," &c., Seba, Thesaur. iii, 1758, p. 71, No. 29, pl. xxvi, fig. 29 (*file* Bloch, 1797). Non-binomial.
- Perca* sp. Tyson, Phil. Trans. Roy. Soc. Lond. lxi, 1771, p. 247, pl. vii, fig. 8; *ibid.* (abridged ed.) xiii, 1809, p. 136, pl. iii, fig. 10. South Seas.
- "*Der glatte Flühderaff*" Klein, Neuer Schaupl. Natur. iii, 1776, p. 153, No. 5 (*fide* Bloch, 1797).
- Anthias polymnus* var. Bloch, Nat. Ausl. Fische vi, 1792, p. 105; Ichthyologie ix, 1797, p. 91, pl. ccxvi, fig. 3. East Indies. Not *Perca polymna* Linn.
- Amphiprion polymnus* var. Bloch & Schneider, Syst. Ichth., 1801, p. 203.
- Lutjanus polymna* var. Lacépède, Hist. Nat. Poiss. iv, 1802, p. 224. *Ex* Bloch.
- Lutjanus percula* Lacépède, Hist. Nat. Poiss. iv, 1802, pp. 194 & 239. Port Praslin, New Britain; collected by Commerson, July 1768.
- Amphiprion polymnus* Cloquet, Diet. Sci. Nat., ed. 2, ii, Oct. 1816, suppl. p. 25, pl. [xlv], fig. 2. Moluccas & Coromandel. Not *Perca polymna* Linn.
- Amphiprion tunicatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 399, pl. cxxxii, fig. 2. Vanikoro. *Idem.* Lesson, Voy. Coquille, Zool. ii, 1831, p. 192, pl. xxv, fig. 3. New Guinea specimen figured. Name mis-spelt *A. punicatus* by Swainson, Nat. Hist. Class. Fish. Amph. Rept. ii, 1839, p. 217.
- Amphiprion percula* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 397. *Idem.* Bleeker, Nat. Tijdschr. Ned. Ind. iii, 1852, p. 287. *Idem.* Schmeltz, Mus. Godef. Cat. v, 1869, p. xviii (Pelew Is.). *Idem.* Alleyne & Macleay, Proc. Linn. Soc. N. S. Wales i, March 1877, p. 342 (Darnley I., Q.). *Idem.* Saville-Kent, Gt. Barrier Reef. Austr., 1893, pp. 33 & 145, chromo-pl. i. *Idem.* Cockerell, Mem. Qld. Mus. iii, 1915, p. 42 (scales). *Idem.* McCulloch & Whitley, Mem. Qld. Mus. viii, 1925, p. 165. *Idem.* Whitley, Rec. Austr. Mus. xvi, 1, 1927, p. 24 (not Port Darwin record).
- Amphiprion ocellaris* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 399. Sumatra. Type in British Museum.
- Amphiprion melanurus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 400. Sumatra. Type in British Museum.
- Prochilus percula* Bleeker, Nat. Tijdschr. Dierk. i, 1863, p. 241. Obi (*fide* Fowler & Bean, 1928).
- Trachichthys (Amphiprion) tunicatus* Sluiter, Zool. Anzeiger xi, 1888, pp. 240-243 (habits). Bay of Batavia.
- Amphiprion (Actinicola) percula* Fowler, Journ. Acad. Nat. Sci. Philad. (2) xii, 4, 1904, p. 533. *Idem.* Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 11 (*q.v.* for refs. to literature not repeated here).

*Variation.*—*Actinicola percula* is well represented in the Australian Museum collection by numerous specimens from Queensland and Indo-Pacific localities. An examination of these shows the following variation:—D.x/15-18 (normally 16): A.ii/12 (rarely 13); 29-38 l.lat. tubes. The number of serrations on the opercles is too variable to be of diagnostic value. The number of transverse rows of body-scales is also variable but is generally less than 60. The areas between the black-edged white bands are mostly light in tone; the ventrals are light, with dark edges, and most of the caudal is light.

Included in the series were some specimens from Port Darwin, North Australia, with 11 dorsal spines, dark breast and pectorals, areas between white bands dark, and most of caudal dark. These I regard as specifically separable from *A. percula* and are identified as *A. bicolor* Castelnan: *vide infra*. A large specimen also confused with *A. percula* has D.xi/17; A.ii/12; l.lat. with 42 tubes; more than 60 transverse rows of body-scales. This evidently represents a new species of *Actinicola* but I refrain from naming it as the specimen is without locality or data.



Very young specimens of *A. percula* sometimes have the areas between the white bands dark, but may at once be distinguished from *A. bicolor* by their light-coloured snouts and 10 dorsal spines. Andaman Islands specimens appear to be referable to a subspecific form distinct from the true *A. percula* (*vide* Day, Fish. India 1877, pp. 378 & 379, pl. lxxx, fig. 4; Proc. Linn. Soc. Lond. xv, 1881, p. 52; Faun. Brit. India, Fish. ii, 1889, p. 377).

*Hosts*.—In Queensland, *Actinicola percula* has been recorded from the Sea Anemones *Stoichactis haddoni* and *S. kenti* (Saville-Kent, *loc. cit.*, as *Discosoma*). It was commonly seen by me nestling amongst anemones' tentacles at Low Isles, and less commonly at Michaelmas Cay, North Queensland, but I have never seen one actually inside an anemone's stomach.

### *Actinicola bicolor* (Castelnau).

(Plate XXVII, Fig. 2.)

*Amphiprion bicolor* Castelnau, Proc. Zool. Acclim. Soc. Vict. ii, May 10, 1873, p. 92. Port Darwin, North Australia. Type in Paris Museum. *Id.* Macleay, Proc. Linn. Soc. N S. Wales ii, June 1878, p. 361.

*Amphiprion percula* Klunzinger, Sitzb. Akad. Wiss. Wien lxxx, 1, 1879, p. 376. Not *Lutjanus percula* Lacépède.

*Amphiprion bicolor* Weber & de Beaufort, Fish. Indo-Austr. Archip. i, 1911, p. 63.

*Amphiprion percula* Whitley, Rec. Austr. Mus. xvi, 1, 1927, p. 24. Port Darwin specimens only. Not *Lutjanus percula* Lacépède.

D.xi/15; A.ii/13; P.i/16; V.i/5; C.15. L.lat. 34 tubes. L.tr.6/1/23.

Head (16.5 mm.) 3.1 in length to hypural joint (52). Depth (25) 2.08 in same. Eye (4) 4.1, interorbital (5) 3.3, and longest pectoral ray (13) 1.3 in head.

Profile somewhat gibbous before the dorsal, slightly concave at the nape and convex before the eyes. Dorsal outline much more arched than ventral. Head higher than long, longer than broad. Preorbital notched, with a strong spine and two or three smaller ones; similar spines along suborbital. Angle and lower half of the preoperculum serrated. Operculum, interoperculum, and suboperculum with long spines. Opercles sealy, scales becoming vestigial on cheeks. Nape, front of head, and chin naked. Lower orbital margin, preorbital, suborbital, and infraorbital area of preoperculum with series of raised ridges. The nostrils are almost surrounded by them. Circular pores along margins of suboperculum and preoperculum and a few scattered on the face. About 17 predorsal scales; the foremost hardly reaches the nuchal band. Interorbital broad, slightly depressed mesially. Lower jaw slightly longer than upper. A single series of blunt teeth in each jaw. Tongue acute, with a blunt tip. A palatal velum present.

Body elevated, compressed, entirely covered with small eyeloid scales which extend a short way on to the bases of all the fins except the first dorsal and the ventrals. Lateral line rising sharply from over the operculum to below the first dorsal, whence it descends in an irregular course to terminate below the second dorsal. Some punctured scales on the sides of the caudal peduncle.

Dorsal originating slightly behind the vertical of the hindmost part of the operculum and terminating somewhat behind the end of the anal base. The spines are elevated anteriorly, but decrease in height posteriorly to form a notch before

the eleventh longer spine which precedes the rounded soft dorsal, whose lobe does not reach the vertical of the hypural joint. Anal similar in form to soft dorsal. Pectorals, ventrals, and caudal broadly rounded.

*Colour*.—After long preservation in alcohol, the ground-colour is brownish black which extends on to all the fins. Three light-edged whitish bands cross the ground-colour. The first begins on the nape, where it joins its fellow from the other side, and descends behind the eye and across the operculum to taper to a point on the interoperculum. The second begins at the dorsal notch and crosses the body in the form of a broad chevron. The third traverses the caudal peduncle and, like the second, completely encircles the fish. A broad whitish margin to the pectoral and remains of what were probably white marginal bands in the young are still to be seen near the tips of some of the dorsal and caudal rays.

Described and figured from a specimen, 68 mm. in total length, from the type-locality, Port Darwin, North Australia (Austr. Mus. Regd. No. A. 4834); collected on a coral reef by Alexander Morton in 1879.

*Variation*.—Besides the specimen dealt with above, there are three specimens of *Actinicola bicolor* in the Australian Museum. One was collected by Morton at the same time as the described specimen; the others were collected at Port Darwin by Messrs. Christie and Godfrey. In the smallest (38 mm. long), the second white cross-band includes five dorsal spines and is produced backwards superiorly to form a broad white margin to the soft dorsal. The anal lobe and the caudal fin are also margined with white. These conditions are also met with in a specimen of 54 mm. The relative widths of the cross-bands vary in individual specimens. The raised ridges on the head are not found in the young, but there are additional ridges on the interoperculum of my largest specimen (73 mm.).

*Locality and Known Range*.—Port Darwin, North Australia.

*Affinities*.—Very closely allied to *Actinicola percula* (Lacépède), but with eleven dorsal spines, and the face, ventrals, and areas between the cross-bands uniformly dark.

The original description of this species, by Castelnau, is probably inaccurate in such details as fin-formulæ.

#### PHALEREBUS, gen. nov.

Orthotype.—*Prochilus akallopisos* (Bleeker).

*Prochilus akallopisos* Bleeker<sup>25</sup> is distinguished from *Amphiprion* and *Actinicola* by its increased number (19-21) of dorsal rays and the absence of transverse bands. It was originally described<sup>26</sup> as *Amphiprion akallopisos*.

*Amphiprion nigripes* Regan<sup>27</sup> from the Maldive Islands is apparently congeneric.

<sup>25</sup> Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, pp. 22 & 35; Atl. Ichth. ix, 1877, pl. cccc, fig. 3.

<sup>26</sup> Bleeker, Nat. Tijdschr. Ned. Ind. iv, 1853, p. 281. Priaman.

<sup>27</sup> Regan, Trans. Linn. Soc. Lond. xii, 1908, p. 230, pl. xxiv, fig. 2.

## Family CHROMIDÆ.

**Tetradrachmum melanurus** (Bleeker).

(Text-fig. 1.)

- Dascyllus aruanus* var. *a*. " *pinna caudali postice nigra* " Bleeker, Nat. Tijdschr. Ned. Ind. ii, 1851, p. 246. Sumbawa, East Indies.
- Dascyllus melanurus* Bleeker, Nat. Tijdschr. Ned. Ind. vi, 1854, p. 109. Sumbawa, &c., East Indies. *Id.* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 12, and Journ. Mus. Godef. xv (Fische Südsee vii), 1881, p. 236 (not plate).
- Tetradrachmum melanurus* Bleeker, Ned. Tijdschr. Dierk. i, 1863, p. 231 (*vide* Weber & Beaufort, 1911). *Id.* Bleeker, Atl. Ichth. ix, 1877, pl. ccccix, fig. 1 and Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, pp. 144 & 149. *Id.* Weber & Beaufort, Fish. Indo-Austr. Archip. i, 1911, p. 385 (references).
- Pomacentrus onyx* De Vis, Proc. Linn. Soc. N. S. Wales viii, 4, Feb. 21, 1884, p. 451. South Seas. Type in Queensland Museum seen.
- Tetradrachmum melanurum* Steindachner, Abhand. Senckenberg Ges. xxv, 1900, p. 438 (*vide* Fowler & Bean, 1928).
- Dascyllus* (*Dascyllus*) *melanurus* Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, pp. 14 & 20 (references).

RE-DESCRIPTION OF **Pomacentrus onyx** De Vis.

D.xii/13; A.ii/12; P.15; V.i/5; C.15. Lateral line with 17 tubes. Se.23. L.tr.3/1/8.

Head (12 mm.) 2.8 in length to hypural joint (34). Depth (21) 1.6 in same. Eye (5) 2.4, interorbital (4.5) 2.6, snout (3) 4.0 in head.

Profiles markedly convex, the upper more so than the lower. Head almost entirely sealy. Eye large; interorbital broad, convex. Snout bluntly rounded. Suborbital and preoperculum with small, regular serrations; other opercles entire. Jaws subequal. Maxillary reaching to below anterior half of eye. A row of small conical teeth in each jaw.

Body elevated, compressed, covered with ctenoid scales which are largest on the sides, in about 23 transverse rows between operculum and hypural joint, and extending on to the fins. Lateral line originating over the operculum between two strongly ctenoid scales and terminating below the soft dorsal. Ventrals with axillary scales.

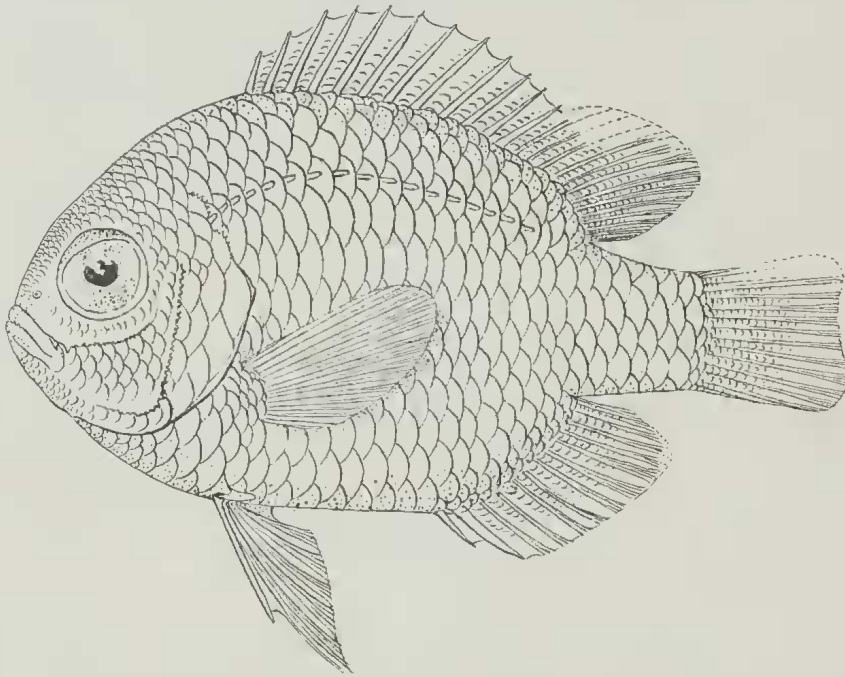
Dorsal originating behind the vertical of the origin of the ventrals and terminating behind the anal. Spinous dorsal higher than soft portion. Anal spines strong, soft portion of the fin similar to that of dorsal but with a longer base. Pectoral shorter than head, rounded, the upper rays longest. Ventrals pointed, reaching the first anal spine when adpressed. Caudal lobes probably bluntly rounded, but the tail of the type is damaged.

The type of *Pomacentrus onyx* De Vis is a faded formalin specimen and no colour markings can now be traced. De Vis described the colouration as follows:— " Four black bands, first over the eye to the chin and chest. Second from anterior half of spinous dorsal to ventral. Third from posterior half of soft dorsal to anal. Fourth forming a large ovate patch covering the end of the caudal. Ventrals black."

Described and figured from the lectotype of *Pomacentrus onyx* De Vis, a specimen 34 mm. in length from snout to hypural joint, selected from a series of seven co-types, 21-39 mm. (Qld. Mus. Regd. No. I. 11/99.)

*Locality*.—"South Seas." Collected by Captain Browne.

NOTE.—*Chaetodon araneus* Bennett<sup>28</sup> from Ceylon is the *Dascyllus aruanus* "variëteit met eene zwarte staartvin" of Schlegel & Müller,<sup>29</sup> and appears to be specifically distinct from *Tetradrachmum melanurus* (Bleeker).



Text-fig. 1.—*Tetradrachmum melanurus* (Bleeker). Lectotype of *Pomacentrus onyx* De Vis from the "South Seas." (The usual dark bands have completely faded from De Vis' types, so cannot be included in this figure.)

G. P. Whitley, del.

#### MECÆNICHTHYS, gen. nov.

Orthotype.—*Heliastes immaculatus* Ogilby.

Eye large. All opercles entire. No preorbital spine or notch. Top of head scaly to level of nostrils. Suborbital naked, not adnate to cheek. A single series of well-developed, fixed teeth in each jaw; each tooth is slightly curved, subcylindrical near its base with a bluntly pointed tip, and is not fused with its neighbours, nor are there gaps between the teeth. Gill-rakers short.

Body deep, compressed, suborbicular, scaly. Caudal peduncle short and broad. Ctenoid scales in less than thirty transverse series, extending on to all the fins except ventrals. Thirteen dorsal spines. Base of soft dorsal nearly half length

<sup>28</sup> Bennett, Fish. Ceylon, Feb. 1830, p. 17, pl. xvii.

<sup>29</sup> Schlegel & Müller, Verh. Nat. Ges. overz. Pisc., 1844, p. 21.

of base of spinous dorsal. Two anal spines. Caudal bilobed. First ventral ray produced. Pectoral at least as long as head.

Fairly uniformly dark in colour with no transverse bands.

### *Mecænichthys immaculatus* (Ogilby).

*Heliastes immaculatus* Ogilby, Proc. Linn. Soc. N. S. Wales x, 3, Dec. 21, 1885, p. 446. Shark Reef, Port Jackson. Type in Austr. Museum seen. *Id.* Ogilby, Cat. Fish. N. S. Wales 1886, p. 44.

*Heliastes immaculatus* Waite, Austr. Mus. Mem. iv, 1, 1899, p. 86, pl. xiv.

*Chromis hypsilepis* Waite, Mem. N. S. W. Nat. Club ii, 1904, p. 37. Ref. to Waite only. Not *Heliastes hypsilepis* Günther, Ann. Mag. Nat. Hist. (3) xx, July 1, 1867, p. 66.

*Chromis ? immaculatus* McCulloch, Zool. Res. Endeav. i, 1911, p. 74.

*Glyphisodon immaculatus* McCulloch, Austr. Zool. ii, 3, 1922, p. 95, pl. xxviii, fig. 253c.

A specimen from Cape Moreton in the Queensland Museum (Regd. No. *I. 2547*) agrees with the original description but has four rows of scales on the cheek instead of eight as given by Ogilby. Reference to the type in the Australian Museum (*B. 7254*), however, shows that four is the correct number of longitudinal rows of cheek-scales.

New record for Queensland. Waite (1904) has considered this species to be identical with *Chromis hypsilepis* (Günther), but it is readily distinguished by its much rounder body, shorter and broader caudal peduncle, larger number of dorsal and anal rays, and by the absence of the black spot on the base of the pectoral, and the white spot on the caudal peduncle. In *Chromis hypsilepis* the teeth are conical and in several series, the outer being the larger.

### Family POMACENTRIDÆ.

The early systematic writers on fishes grouped what are now known as Pomacentridæ with other brightly coloured coral fishes. Noteworthy in this regard are Linnæus, Förskal, Gmelin, Gronovius, Bloch, and Lacépède, who described many species under the genera *Chaetodon*, *Holocentrus*, *Labrus*, &c., from which they are well separated to-day. The first generic differentiation of a Pomacentrid from this *Chaetodon*-complex of the ancients was made by Förskal<sup>30</sup> who noted, by the Arabic term "*Abu-defduf*," a species (*Chaetodon sordidus*) from the Red Sea. I have elsewhere<sup>31</sup> suggested, however, that the names in Förskal's "*Descriptiones Animalium*" be disregarded as being of taxonomic validity, and *Abudefduf* is not regarded as a permissible generic name.<sup>32</sup>

Passing *Prochilus* Klein 1775 = Walbaum 1792, as a non-binomial name revived by Bleeker for the Amphiprionid fishes, and *Amphiprion* Bloch & Schneider 1801, the next strictly Pomacentrid genus defined appears to be *Pomacentrus* Lacépède,<sup>33</sup> and, as this is the first valid generic name encountered, the family name must be Pomacentridæ. Jordan, in his "*Genera of Fishes*," gives *Chaetodon pavo* Bloch as the genotype of *Pomacentrus* "by general consent," but the type-designation

<sup>30</sup> Förskal, *Descriptiones Animalium* 1775, pp. xiii & 59.

<sup>31</sup> Whitley, Rec. Austr. Mus. xvi, 1928, p. 230.

<sup>32</sup> See however Jordan & Seale, Bull. U. S. Bur. Fish. xxv, 1906, p. 284, footnote.

<sup>33</sup> Lacépède, Hist. Nat. Poiss. iv, 1803, p. 505.

has been satisfactorily accomplished in an obscure work to which my attention has been directed by my friend Mr. Tom Iredale. The logotype of *Pomacentrus* was selected by Guichenot,<sup>34</sup> who wrote "L'espèce qui a servi de type à l'établissement de ce genre est le *Pomacentrus pavo* des auteurs." This statement occurs in livraison 598 of Guichenot's work and was probably published in 1838 (*teste* T. Iredale).

As here restricted the family Pomacentridæ includes *Pomacentrus* and its allies with compressed teeth and a denticulate preoperculum but, in the broad sense, accommodates *Glyphisodon*, *Parna*, and their relatives.

#### ***Pomacentrus suvarovens* Stead.**

*Pomacentrus suvarovens* Stead, Note Coll. Fish. Suwar. Is., 1907, p. 4, pl. i. Suwarow Island.

In September 1907, the Department of Fisheries in Sydney published, by Government authority, a booklet entitled "Note on a Small Collection of Fishes from Suwarow Island," by David G. Stead. Only two new species were therein described: *Pomacentrus suvarovens* and *Canthigaster australis*. The holotype and paratypes of the Pomacentrid species were later presented to the Australian Museum where they are Regd. Nos. Ia. 2460 and 2461-2464 respectively. Examination of these shows that the species is a true *Pomacentrus* allied to *P. pavo*.

*Locality*.—Suwarow Island, South Pacific Ocean (Lat. 13° 13' S., Long. 163° 09' W.); collected by A. G. Hobbs.

#### ***Pseudopomacentrus niomatus* (De Vis).**

(Text-fig. 2.)

*Pomacentrus niomatus* De Vis, Proc. Linn. Soc. N. S. Wales viii, 4, Feb. 21, 1884, p. 451. "Locality probably South Sea Islands." Type in Qld. Mus. examined.

*Pomacentrus inornatus* Jordan & Seale, Bull. U. S. Fish. Bur. xxv, 1906, p. 281. *Emend. pro P. niomatus* De Vis. (Apia, Samoa.)

D.xiii/14; A.ii/14; P.16; V.i/5; C.15. Sc.25; 16 tubes on L.lat. plus 2 series of punctured scales. L.tr. 3/1/9.

Head (16 mm.) 3.0 in length to hypural joint (48). Depth of body (24) 2.0, and depth of caudal peduncle (7) 6.8 in the same. Eye (6.5) 2.4, snout (4) 4.0, and interorbital (5) 3.2 in head.

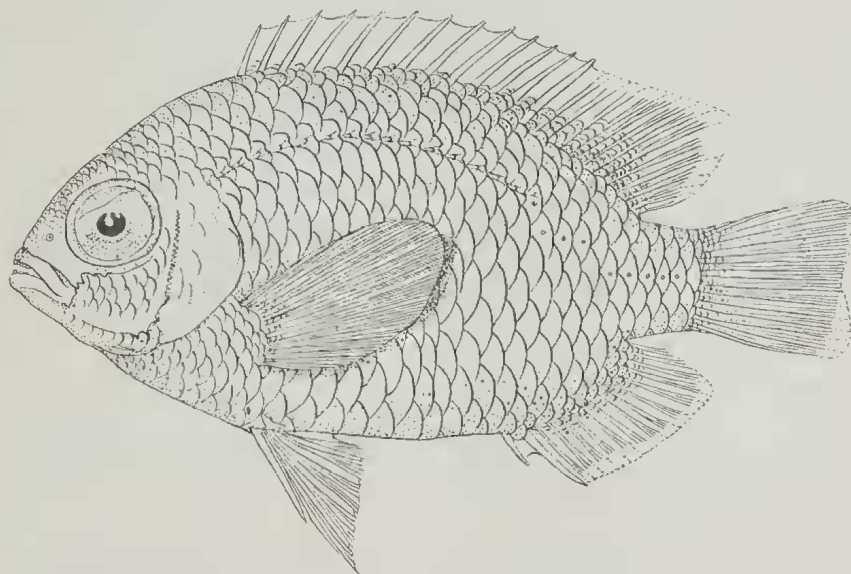
Eye large. Preorbital with a marked notch; suborbital very narrow, scaleless, with one or two serrations anteriorly. Preoperculum finely serrated, its lower limb entire. Two or three rows of scales on cheeks. Small scales cover the interorbital and extend well forward over the snout. The operculum of the type is now denuded of scales. Interorbital very slightly convex. Maxillary reaching beyond vertical of anterior margin of eye. A series of compressed incisors in each jaw and extending along the rami.

Body deep, compressed, covered with large scales which form sheaths for the proximal portions of the dorsal and anal fins.

<sup>34</sup> Guichenot, Dict. pittoresque d'Histoire Naturelle viii, "1839" (1838?), p. 502.

Dorsal originating in advance of the vertical of the origin of the ventrals and terminating a little behind the anal. The spines increase in height posteriorly. Ventrals reaching the vent. The soft portions of the fins are slightly damaged in the type but their margins were probably somewhat pointed.

The colour of the type has faded to a uniform yellowish with some silvery flecks on the sides. According to De Vis, it was uniform pale brown with a minute black super-axillary spot.



Text-fig. 2.—*Pseudopomacentrus niomatus* (De Vis). Holotype of *Pomacentrus niomatus* De Vis from the "South Sea Islands."

G. P. Whitley, del.

Described and figured from the holotype of *Pomacentrus niomatus* De Vis, a specimen 48 mm. from snout to hypural joint. (Qld. Mus. Regd. No. I. 11/111.) This species is closely allied to *Pomacentrus trilineatus* Bleeker (*non* Cuv. & Val.), part<sup>35</sup> but lacks the spot on the caudal peduncle and has a serrated suborbital.

Regan<sup>36</sup> has wrongly identified *Pomacentrus inornatus* De Vis from Easter Island. The species he figures is, however, a new species of *Eupomacentrus* which may now be known as *E. paschalis* (*vide* p. 225 of this paper).

Fowler<sup>37</sup> has recorded *Pomacentrus inornatus* from Laysan Island, but it seems doubtful whether De Vis' species occurs in such high latitudes.

#### ***Pseudopomacentrus flavicauda* (Whitley).**

*Pomacentrus flavicauda* Whitley, Rec. Austr. Mus. xvi, 6, June 11, 1928, p. 297, fig. 1. Northwest Islet, Queensland. Holotype in Austr. Mus., Sydney.

Three specimens from Darnley Island, 6 Oct. 1912; collected by J. R. Tosh. (Qld. Mus. Regd. No. I. 812.) Twelve from Masthead Island, collected by H. A. Longman. (Q.M. No. I. 757.)

<sup>35</sup> Bleeker, Atl. Ichth. vi, 1877, pl. cccvi, fig. 6 only.

<sup>36</sup> Regan, Proc. Zool. Soc. Lond. 1913, ii, p. 370, pl. lviii, fig. 1.

<sup>37</sup> Fowler, Bish. Mus. Bull. xxxviii, 1927, p. 22.

**Dischistodus fasciatus** (Cuv. & Val.).

"*Prochilus* No. 2 *corpore angustiore in medio fascia lata*," &c., Klein, Miss. Pisc. v, 1749, p. 60, pl. xii, fig. 2 (*vide* Bleeker, 1877). Pre-Linnean.

*Pomacentrus fasciatus* Cuvier & Valenciennes, Hist. Nat. Poiss. v, July 1830, p. 426, pl. cxxxiv. Java. *Id.* Schlegel & Müller, Verh. Nat. Ges. Ned. overz. Pisc., 1844, p. 20, pl. iv, fig. 1. *Id.* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 19. *Id.* Klunzinger, Sitzb. Akad. Wiss. Wien lxxx, 1. 1879, p. 397.

*Dischistodus fasciatus* Bleeker, Atl. Ichth. ix, 1877, pl. cccci, fig. 8 and Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 86.

*Pomacentrus quadrifasciatus* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 87, in synonymy. *Ex* Kuhl & van Hasselt, MS.

*Pomacentrus (Dischistodus) fasciatus* Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, pp. 67 & 111 (references).

One from Morceton Bay presented by the Amateur Fishermen's Association of Queensland. (Qld. Mus. Regd. No. *I.2189*.) Klunzinger (1879) recorded this species from Port Darwin, but this is the first record of its occurrence in Queensland. Other specimens collected by J. Colclough at Dobo, Aru Islands, are in the A. F. A. Q. Museum, Brisbane (Nos. *1168-1169*).

The name *Pomacentrus quadrifasciatus* was evidently written on a drawing by Kuhl and van Hasselt, who collected the species in Java about a century ago. Their name, however, was not utilised by Cuvier & Valenciennes nor by Schlegel & Müller who described the species as *Pomacentrus fasciatus*. Kuhl & van Hasselt's name was published in the synonymy of *P. fasciatus* by Bleeker (1877) and is a *nomen nudum* and an absolute synonym of *P. fasciatus*.

*Pomacentrus (Dischistodus) fasciatus* var. *intermedia* Weber,<sup>38</sup> from the Philippine Islands, may apparently be maintained as a distinct variety.

**Dischistodus frenatus** (De Vis).

(Text-figure 3.)

*Pomacentrus frenatus* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 874. Cardwell, Queensland. Type in Qld. Mus. examined. *Id.* McCulloch & Whitley, Mem. Qld. Mus. viii, 1925, p. 166.

RE-DESCRIPTION OF **Pomacentrus frenatus** De Vis.

D.xiii/15; A.ii/14; P.i/16; V.i/5; C.15. Sc.24. L.tr.3/1/8; 17 tubes on L.lat. plus 7 punctured scales on caudal peduncle.

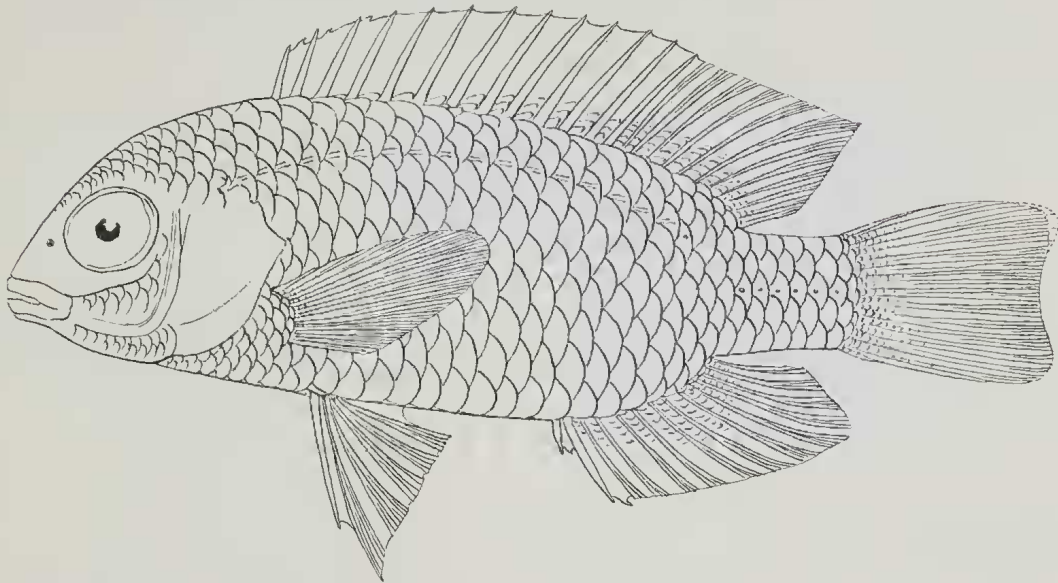
Head (31 mm.) 3.2 in length to hypural joint (101). Depth of body (46) 2.2, and depth of caudal peduncle (17) 5.9 in same. Eye (8) 3.8, interorbital (9) 3.4, preorbital (7) 4.4, snout (9.5) 3.2 in head. Last dorsal spine, 17 mm.; eighth dorsal ray, 24; second anal spine, 13; and ninth anal ray, 22.

Profiles of head markedly convex, the upper much more so than the lower. Scales cover the interorbital area but the frons, preorbital, and suborbitals are naked. Three rows of large scales and two of small ones on the cheeks. Preorbital deep, without notch. Suborbital and ascending limb of preoperculum evenly and strongly

<sup>38</sup> Weber, Siboga-Exped., Fische, May 1913, p. 340, pl. vi, fig. 4. Sulu.



denticulated; other opercular margins entire. Interorbital convex. Maxillary reaching vertical of anterior margin of eye. Conic teeth in each jaw.



Text-fig. 3.—*Iredaleichthys pallidus* (De Vis). Holotype of *Glyphidodon pallidus* De Vis from Banks Group, Melanesia.

G. P. Whitley, del.

Body robust, the dorsal profile well arched. Caudal peduncle deep. The scales are large and regular and extend a little way onto the fins excepting the ventrals. Lateral line gently curved, its scales without notched margins.

Dorsal originating over the opercular flap, well in advance of the vertical of the insertion of the ventrals. The anterior spines are shorter than those following them and the membranes are produced into free pencils. The soft dorsal forms a pointed lobe and terminates a little behind the termination of the anal. Anal similar in form to soft dorsal but not so high and with a longer base. Pectorals rounded. Ventrals reaching vent. Caudal apparently bilobed.

Colour, after long preservation in formalin, uniform straw-yellowish. Originally described as—"Colour pale yellowish green. Between the eyes two transverse lines curving strongly forward. On the cheek two straight lines from the upper part of the preopercle to the angle of the mouth and a line of spots below them. Opercle with spots, dashes, and curved streaks. Scales of the body below the lateral line each with a vertical line on the base extending to the scales above and below it. On the scales above the lateral line posteriorly, small round spots extending a little on the base of the soft dorsal. Base of caudal and pectoral similarly spotted. A very obscure brown patch on the base of the first four dorsal rays. A dark-brown axillary spot and an obscure bluish spot on the origin of the lateral line."

Described and figured from the holotype of *Pomacentrus frenatus* De Vis, a specimen 101 mm. long from snout to hypural joint. (Qld. Mus. Regd. No. I. 13/1366.)

Locality.—Cardwell, North Queensland; collected by Kendall Broadbent.

**Eupomacentrus nigricans** (Lacépède) **var. subniger** (De Vis).

*Holocentrus nigricans* Lacépède, Hist. Nat. Poiss. iv, 1802, pp. 332 & 367. No locality. Ex "*Asprototus atratus*," &c. Commerson, MS. Probably from Mauritius.

*Pomacentrus scolopseus* Quoy & Gaimard, Voy. Uranie & Physic., Zool., 1825, p. 398. Mauritius.

*Pomacentrus tenuis* Cuvier & Valenciennes, Hist. Nat. Poiss. v, July 1830, p. 423. Mauritius.

*Pomacentrus scolopsis* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 28. *Emend. pro P. scolopseus* Q. & G. *Id.* Günther, Journ. Mus. Godeff. xv (Fische Sudsee vii), 1881, p. 227, pl. cxxv, fig. A (Samoa): copied by Lydekker, Roy. Nat. Hist. v, 1896, p. 418 & fig.

? *Pomacentrus scolopsis* Macleay, Proc. Linn. Soc. N. S. Wales ii, 1878, p. 361 (Port Darwin).

*Pomacentrus subniger* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 873. Cardwell, Queensland. Holotype in Qld. Mus. examined.

*Pomacentrus nigricans* Jordan & Seale, Bull. U. S. Bur. Fish. xxv, 1906, p. 281. *Id.* McCulloch & Whitley, Mem. Qld. Mus. viii, 1925, p. 166. Ex De Vis. *Id.* Fowler & Bean, U. S. Nat. Mus. Bull. 100, vol. vii, 1928, p. 118.

RE-DESCRIPTION OF **Pomacentrus subniger** De Vis.

D.xii/16; A.ii/13; P.17; V.i/5; C.15. Sc.26 (De Vis' "Lat. 34" is evidently an error). L.tr. 3/1/8; 19 tubes on L.lat. plus about 8 punctured scales on caudal peduncle.

Head (29 mm.) 3.2 in length to hypural joint (93). Depth of body (45) 2.06, and depth of caudal peduncle (15) 6.18 in same. Eye (9) 3.2, interorbital (8) 3.6, preorbital (6) 4.8 in head.

Head scaly except for chin, mouth, and anterior part of preorbital. Two and a-half rows of scales on cheeks. No preorbital notch. Suborbital and preoperculum strongly and regularly denticulated, other opercles entire. A concealed opercular spine. Interorbital slightly convex. Maxillary almost reaching vertical of anterior margin of eye. A single series of compressed incisors in each jaw.

Body compressed, covered with large scales which extend onto all the fins except the ventrals. Lateral line scales with notched margins and small tubes. Dorsal originating immediately over the ventral spines and terminating slightly behind the anal. The spines are long, but not so high as the longest rays of the soft portion of the fin. Anal spines strong, soft portion of fin apparently similar to that of dorsal, but with a shorter base. Pectorals rounded, upper rays longest. Ventrals reaching vent when adpressed. Caudal bilobed.

Colour, after long preservation in formalin, fairly uniform olive brownish; fins lighter; a small spot at end of soft dorsal. De Vis stated "Colour murky black. Scales with some obscure pearly markings."

Described from the holotype of *Pomacentrus subniger* De Vis, a specimen 93 mm. long from snout to hypural joint. (Qld. Mus. Regd. No. I. 11/80.)

*Locality*.—Cardwell, North Queensland; collected by Kendall Broadbent.

*Remarks*.—In July 1917, the late A. R. McCulloch made the following MS. note:—"The type of *P. subniger* De Vis is preserved in the Qld. Mus. . . . Ogilby identifies it with *P. nigricans* Lacép., of which *P. scolopsis* as figured by Günther,

Fisch. Sudsee, pl. 125, fig. A is considered to be a synonym. De Vis' specimen agrees in detail with Günther's figure, and undoubtedly represents the same species, though I count only 28 scales between the origin of the lateral line and the hypural joint, 19 bearing tubules. D.12/16. A.2/13."

Hawaiian specimens identified by various authors as *Pomacentrus nigricans* are apparently referable to *Eupomacentrus marginatus* Jenkins<sup>39</sup> which has thirteen dorsal spines. Since Jenkins's species is not congeneric with *Pomacentrus marginatus* Rüppell,<sup>40</sup> a species of *Peltochromis*, there seems to be no reason for using the substitute name *Pomacentrus jenkinsi* proposed for it by Jordan & Evermann.<sup>41</sup>

#### *Eupomacentrus paschalis*, nom. nov.

*Pomacentrus inornatus* Regan, Proc. Zool. Soc. Lond. 1913, ii (Sept. 1913), p. 370, pl. lviii, fig. 1. Easter Island. *Id.* Rendahl, N. Hist. Juan Fernandez & Easter I. iii, 1920, p. 60. Not *Pomacentrus inornatus* Jordan & Seale = *Pseudopomacentrus niomatus* (De Vis).

*Pomacentrus jenkinsi* Kendall & Radcliffe, Mem. Mus. Comp. Zool. Harv. xxxv, 3, 1912, p. 132. Easter Island specimens. Not *P. jenkinsi* Jordan & Evermann, Bull. U. S. Fish. Comm. xxii, 1903, p. 189; *ibid.* xxiii, 1, 1905, p. 270, fig. 115, from Hawaii = *Eupomacentrus marginatus* Jenkins.

Regan's identification of *Pomacentrus inornatus* De Vis from Easter Island was incorrect, as a comparison of his figure with my sketch of De Vis' type will show. *P. niomatus* De Vis is doubtless a misprint for *P. inornatus* but I have retained the original spelling in this paper.

As the Easter Island species appears to be new, although allied to *Eupomacentrus marginatus* Jenkins<sup>42</sup> from Hawaii, I name it *Eupomacentrus paschalis*.

#### Sub-family GLYPHISODONTINÆ.

"*Glyphisodia*" Rafinesque, Anal. Nat. 1815 (*vide* Agassiz, Nom. syst. gen. Pisc., 1842, p. 27).

#### NEGOSTEGASTES, gen. nov.

Orthotype.—*Glyphisodon leucozona* Bleeker.<sup>43</sup>

Body oblong. Inferior pharyngeal bone triangular. Snout scaly above or entirely scaly. Scales on the preoperculum, above the scaly inferior limb, in three or four longitudinal series. About fourteen longitudinal series of scales on the body; 2 or 2½ rows between the lateral line and the scaly sheath of the dorsal below the last spine. Twelve dorsal spines. Caudal slightly emarginate.

The name *Stegastes* was proposed by Jenyns<sup>44</sup> for *S. imbricatus* from the Cape Verde Islands. Bleeker<sup>45</sup> used Jenyns' name for a subgenus of *Glyphisodon* and gave a definition which disagrees with Jenyns' account in the proportions and shape

<sup>39</sup> Jenkins, Bull. U. S. Fish. Comm. xix, June 8, 1901, p. 391, fig. 5. Honolulu.

<sup>40</sup> Rüppell, Atlas zu Rüppell, Reise (Senckenb. Nat. Ges.), Fische, 1829, p. 38, pl. viii, fig. 2. Massowah, Red Sea.

<sup>41</sup> Jordan & Evermann, Bull. U. S. Fish. Comm. xxii, April 11, 1903, p. 189. Honolulu.

<sup>42</sup> Jenkins, Bull. U. S. Fish. Comm. xix, June 8, 1901, p. 391, fig. 5.

<sup>43</sup> Bleeker, Nat. Tijdschr. Ned. Ind., xix, 1859, p. 339. Karangbollong, Java.

<sup>44</sup> Jenyns, Zool. Voy. Beagle, 1840, p. 62.

<sup>45</sup> Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 92.

of the unpaired fins. *Stegastes*, in the sense used by Bleeker (*non* Jenyns), included *Glyphidodon lacrymatus*, *G. leucozona*, *G. batjanensis*, and *G. dickii*, all of which have 13 or 14 longitudinal rows of body-scales and the suborbital and inferior preopercular limb scaly. Fowler & Bean,<sup>46</sup> following Bleeker, added *Abudefduf azurepunctatus* to this group.

Jenyns however stated that vomerine and palatine teeth are present in *Stegastes*, and this feature, combined with the different shapes of the unpaired fins, and the denticulated preoperculum, shows that *Stegastes* cannot be applied to the very different *Glyphisodontine* forms.

I accordingly propose the new generic name *Negostegastes* for *Glyphisodon leucozona* Bleeker and its allies mentioned by Bleeker, including also *Abudefduf azurepunctatus* Fowler & Bean.

#### **Glyphidodontops amabilis** (De Vis).

*Glyphidodon amabilis* De Vis, Proc. Linn. Soc. N. S. Wales viii, 4, Feb. 21, 1884, p. 452. South Sea Islands.

*Abudefduf amabilis* Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 177 (references and synonymy).

One specimen from Murray Island, Torres Strait, was collected by Mr. Melbourne Ward recently. (Austr. Mus. Regd. No. *Ia*. 3719.)

New record for Australia. This species is very closely allied to *G. albofasciatus* Hombron & Jacquinot,<sup>47</sup> from Borneo.

#### **Glyphidodontops unimaculatus** (C. & V.).

*Glyphisodon unimaculatus* Cuvier & Valenciennes, Hist. Nat. Poiss. v, July 1830, p. 478. Timor. *Id.* Schlegel & Müller, Verh. Nat. Ges. Ned. overz, Pisc., 1844, p. 23, pl. vi, fig. 1.

*Glyphidodontops leucogaster* Bleeker, Atl. Ichth. ix, 1877, pl. cccvii, fig. 5 (not 6 as in legend at foot of plate). East Indies. Not *Glyphisodon leucogaster* Bleeker, s.str. (Nat. Geneesk. Arch. Neerland's-Indie, iv, 2, 1846, p. 156.)

*Glyphidodontops unimaculatus* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 140.

*Abudefduf unimaculatus* Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 145.

One specimen from Murray Island, collected by Mr. M. Ward. (Austr. Mus. Regd. No. *Ia*. 3720.) New record for Australia.

#### Genus IREDALEICHTHYS Whitley.

*Chrysiptera* Swainson, Nat. Hist. Classif. Fish. Amphib. Rept. ii, July 1839, pp. 171 & 216. Preoccupied by *Chrysopterus* Swainson 1836 and *Chrysoptera* Zincken 1817. Emended to *Chrysoptera* by Agassiz. Logotype, selected by Swain, Proc. Acad. Nat. Sci. Philad. 1882 (1883), p. 273, *Chrysiptera azurea* Swainson = *Glyphisodon cyaneus* Quoy & Gaimard.

*Iredaleichthys* Whitley, Rec. Austr. Mus. xvi, 6, June 11, 1928, p. 296. Substitute for *Chrysiptera* Swainson, preocc. Orthotype, *C. azurea* Swainson = *Glyphisodon cyaneus* Quoy & Gaimard.

<sup>46</sup> Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 123.

<sup>47</sup> Hombron & Jacquinot, Voy. Pole Sud., Zool. iii, Poiss. 1853, p. 49, pl. v, fig. 4.

*Iredaleichthys* (type, *Glyphisodon cyaneus* Q. & G.) is allied to *Glyphidodontops* Bleeker<sup>48</sup> (type, *Glyphisodon antjerius* C. & V.—*vide* Jordan), but though *Glyphidodontops* was regarded as a substitute for *Chrysiptera* Swainson by Bleeker<sup>49</sup> he also stated, "Ce genre, bien que synonyme de *Chrysiptera* Swns., est tout autrement caractérisé ici que par Swainson." In Bleeker's key to the species, *Glyphidodontops cyaneus* Bleeker enters the section "Dents pharyngiennes en partie obtuses," i.e. *Iredaleichthys*, whilst *G. antjerius*, the true *Glyphidodontops*, has "Dents pharyngiennes toutes pointues," &c. These characters appear to be of at least subgeneric importance and I therefore retain the two names as distinct. Fowler & Bean<sup>50</sup> have shown that *Glyphidodontops cyaneus* Bleeker is not identical with *Glyphisodon cyaneus* Quoy & Gaimard and have renamed it *Abudefduf bleekeri*.

### *Iredaleichthys pallidus* (De Vis).

(Text-figure 4.)

*Glyp[h]idodon pallidus* De Vis, Proc. Linn. Soc. N. S. Wales viii, 4, Feb. 21, 1884, p. 452. Banks Group. Type in Queensland Museum examined.

*Abudefduf pallidus* Jordan & Seale, Bull. U. S. Bur. Fish. xxv, 1906, p. 286. "New Guinea." *Ex* De Vis.

D.xiii/12; A.ii/12; P.17; V.i/5; C.15. Sc.24. 17 tubes on L.lat. L.tr. c.11.

Head (13 mm.) 3.3 in length to hypural joint (43); depth of body (15.5) 2.7, and depth of caudal peduncle (6) 7.1 in same. Interorbital (3.5) equal to snout (3.5) and 3.7 in head. Eye (5) 2.6 in head.

Upper profile roundly convex, the lower sloping downwards and backwards almost in a straight line to anal. Head scaly, except for the snout before the interorbital and the narrow suborbital. Eye large, its diameter longer than the width of the convex interorbital area. All opercles entire. Maxillary reaching to below anterior third of eye. A single series of compressed teeth in each jaw.

Body elongate, compressed, entirely covered with scales which extend a short distance onto the fins. About 14 predorsal scales. The lateral line extends to below the soft dorsal and bears 17 tubes; some punctured scales follow these and a row of them extends along the caudal peduncle.

Dorsal originating slightly in advance of the vertical of the origin of the pectoral and terminating a little behind the anal. The spines increase in height posteriorly and the rays of the soft portion form a pointed lobe. Anal similar to soft dorsal but with longer rays. The membranes of the anal and anterior dorsal spines appear to be produced into pencils. Pectorals rounded, shorter than head. Ventrals pointed, their first rays reaching a trifle beyond the vent. Caudal lobes rounded, the lower longer.

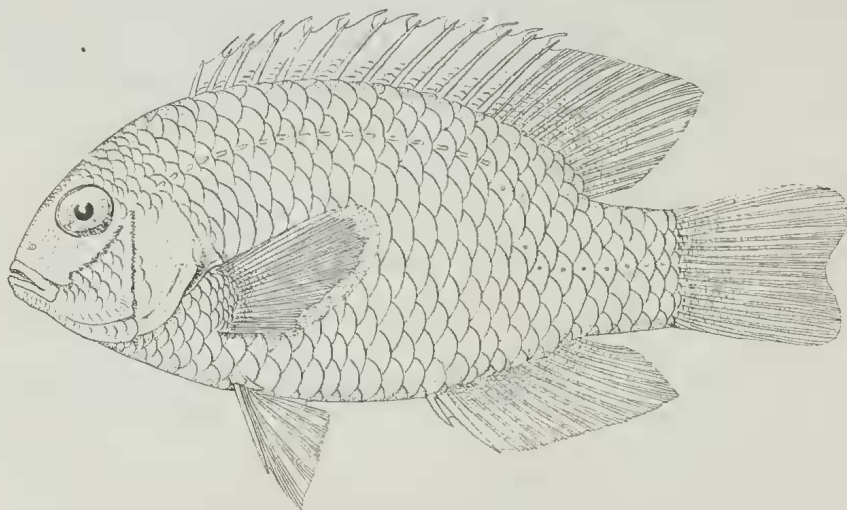
<sup>48</sup> Bleeker, Arch. Néerl. Sci. Nat. xii, 1877, p. 41. Orthotype, *Glyphisodon antjerius* (Cuv. & Val.) Bleeker. *Fide* Jordan, Gen. Fish. iii, 1919, p. 387.

<sup>49</sup> Bleeker, Nat. Verhand. Holland. Maatsch. Wetensch. (3) ii, 6, 1877, p. 128. I did not possess this work when the genus *Iredaleichthys* was proposed but since obtained it from Holland.

<sup>50</sup> Fowler & Bean, U. S. Nat. Mus. Bull. 100, vol. vii, 1928, pp. 124 & 165. Timor and Philippine Islands.

The type of *Glyphidodon pallidus* has now faded to a uniform straw yellow colour with the vent brown. De Vis gave its colours as—"Pale yellowish blue; a blue line from base of dorsal to muzzle on each side. Two curved lines beneath the eye; small oval spots or short streaks above lateral line, and extending upon the webs of the dorsal; streaks on a few scales below the lateral line."

Described and figured from the holotype of *Glyphidodon pallidus* De Vis, a specimen 43 mm. in length to hypural joint. (Qld. Mus. Regd. No. I. 13/1353.)



Text-fig. 4.—*Dischistodus frenatus* (De Vis). Holotype of *Pomacentrus frenatus* De Vis from Cardwell, Queensland.

G. P. Whitley, del.

*Locality*.—Banks Group, collected by C. F. Browne. This is probably the Banks Group between the New Hebrides and the Santa Cruz Islands and not Banks Island in Torres Strait, Queensland. Jordan & Seale (*loc. cit.*) give New Guinea as the locality for this species.

*Affinities*.—*Glyphidodon pallidus* De Vis is regarded by Fowler & Bean<sup>51</sup> as a synonym of *Abudefduf glaucus* (C. & V.) with *Glyphisodon modestus* Bleeker and *G. phaiosoma* Bleeker as further synonyms. I am not entirely convinced that this is correct and consequently use De Vis' name for the present species. *Iredaleichthys pallidus* is very closely allied to *Glyphisodon glaucus* C. & V., *G. cyaneus* Quoy & Gaimard, and *Abudefduf bleekeri* Fowler & Bean. Other species which apparently must be grouped with *Glyphidodon pallidus* in the genus *Iredaleichthys* are *Glyphidodon modestus* Schlegel & Müller, *G. unioellatus* Quoy & Gaimard, *G. hedleyi* Whitley, *Abudefduf sapphirus* Jordan & Richardson, *A. turchesius* Jordan & Seale, and *A. hemicyaneus* Weber.

#### Sub-family PARMINÆ.

#### **Parma mccullochi** sp. nov.

*Hypsipops microlepis* Waite, Rec. Austr. Mus. vi, 2, Sept. 15, 1905, pp. 67-69. *Idem.*, Alexander, Journ. Linn. Soc. Lond., Zool., xxxiv, 1922, p. 428. Houtmans Abrolhos specimens only. Not *Parma microlepis* Günther 1862.

<sup>51</sup> Fowler & Bean, U. S. Nat. Mus. Bull. 100, vol. vii, 1928, p. 169.

D.xiii/18; A.ii/14; P.i/20; V.i/5; C.13. L.lat. with 29 tubes and about 8 punctured scales. L.tr. 6/1/13.

Head (35.5 mm.) 3.1 in length to hypural joint (112). Depth of body (65) 1.7, and depth of caudal peduncle (21) 5.3 in same. Eye (10) 1.3 in interorbit (13) and 3.5 in head.

Upper profile of head steep, convex; lower similar but less steep. Head much higher than long, much longer than broad. Eye rather large. All opercles entire. Preorbital margin slightly excavated though not definitely notched. Jaws subequal, lips fleshy. Maxillary not reaching vertical of eye. A single series of small compressed teeth in each jaw. Gill-membranes united across isthmus. Head densely scaled except anteriorly, around mouth, on chin and anterior half of suborbital, where there are naked areas with scattered pores. Auxiliary scales, many of them rudimentary, on top of head and sides of nape.

Body ovate, compressed, covered with small ciliated scales which are largest on anterior portions of sides and extend to the distal portions of all the unpaired fins, forming dense sheaths; they cover the basal part of the pectoral and extend along some of its membranes, but there are no scales on the ventrals. Lateral line well arched, its tube-bearing scales with lobe-like edges. Vent before the anal fin, with a minute papilla.

Dorsal originating in advance of pectorals and ventrals and terminating behind anal. Membranes of first dorsal produced into little pencils. Fourth to ninth spines longest, subequal. Soft dorsal high, pointed, the seventh and eighth rays longest, the last minute and divided. Anal spine longer than any of the dorsal spines and very strong; anal fin lower and shorter than soft dorsal, the seventh ray longest and the last short and divided. Pectoral somewhat pointed, longer than head, slightly shorter than ventrals whose first rays are filamentous and reaching anal fin. Caudal lobes rounded, the upper longer.

Colour, after long preservation in alcohol, fairly uniform brown, a little darker on all the fins except the pectorals, which are lighter. No white opercular patch. Described from the holotype, a unique specimen, 112 mm. in length to hypural joint, or 6 inches in total length. (Austr. Mus. Regd. No. 1.13144, originally labelled "*Parma microlepis*, var.")

*Locality*.—Rottnest Island, West Australia. Presented by the Fisheries Department of West Australia.

Named in honour of the late A. R. McCulloch, who drew, whilst still in his teens, the accurate and beautiful figures of the allied *Parma microlepis* showing its variations with growth.<sup>52</sup>

*Parma mccullochi* is the western congener of *P. microlepis* Günther,<sup>53</sup> apparently differing from that species by having a more declivous profile, smaller scales, and longer pectorals.

<sup>52</sup> In Waite, Rec. Austr. Mus. vi, 2, 1905, p. 67, pl. xii.

<sup>53</sup> Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 57. Port Jackson (young); and *ibid.* p. 58. "Australia" (adult, as *Parma squamipinnis*).

**Parma oligolepis** sp. nov.

(Pl. xxviii, fig. 1.)

*Hypsipops polylepis* Ogilby, *Commerc. Fish. Fisher. Qld.* 1915, p. 55. Moreton Bay. Not *Parma polylepis* Günther 1862.*Parma polylepis* McCulloch & Whitley, *Mem. Qld. Mus.* viii, 2, 1925, p. 166.

D.xiii/19; A.ii/15; P.i/20; V.i/5; C.13. 23 tubes on l.lat. plus about 7 punctured scales. L.tr. 4/1/13.

Head (49 mm.) 3.3 in length to hypural joint (166). Depth of body (93) 1.7, and depth of caudal peduncle (26) 6.3 in same. Eye (12) equal to its distance from tip of preorbital process (12), 1.5 in interorbital width (18) and 4.0 in head.

Upper profile of head evenly sloping, the lower profile convexly rounded. Head higher than long and longer than broad. Eye small. All opercles entire. Preorbital forming a broad process. Jaws subequal with thick lips. Maxillary not reaching vertical of anterior margin of eye. A single series of compressed teeth in each jaw. Five branchiostegal rays. Gill-membranes united across isthmus. Eleven gill-rakers on the lower limb of the first branchial arch, the median ones longest. Head scaly except for an area before the eyes, around the mouth, and along the preopercular margin. Some scales on the nape have small auxiliary scales between them, a rare feature in Australian Pomacentrids.

Body ovate, compressed, covered with ciliated scales which are largest on the sides, and extend onto all the fins except the ventrals. The scales form dense sheaths at the bases of the unpaired fins and extend in rows between the rays; minute scales also cover the proximal portions of the rays themselves. No scales on membrane between caudal lobes. Lateral line gently arched, composed of 23 tube-bearing scales followed by a row of punctured scales on the side of the caudal peduncle. The lateral line scales each have a rounded median lobe. Genital papilla present.

Dorsal originating over the base of the pectoral and terminating a little behind the termination of the anal. The seventh to ninth spines are the longest. Soft dorsal high, pointed; seventh and eighth rays longest. Anal similar to soft dorsal but with a rounded margin. Pectorals nearly as long as the head. Ventrals pointed, reaching the vent. Caudal lobes rounded.

Colour, after preservation in formalin, fairly uniform brown, somewhat darker on the borders of the fins and the margins of the scales on the body.

Described and figured from the holotype, a specimen 166 mm. in length to hypural joint. (Qld. Mus. Regd. No. *I. 2536*.)*Locality*.—Cape Moreton, near Brisbane, Queensland.*Variation*.—Two other specimens in the Queensland Museum show no important variation. No. *I. 3429* from Bundaberg has D.xiii/20; A.ii/15; P.ii/19; L.lat. 22 tubes; Sc.28; L.tr. 4/1/15; and No. *I. 2171* from Green Island has D.xiii/19; A.ii/14; P.ii/18; L.lat. 23 tubes; Sc.29; L.tr. 4/1/13.*Range*.—Queensland; probably a coastal species.*Parma oligolepis* is readily distinguished from its congeners by its larger and fewer scales (29 or less transverse rows between operculum and hypural joint) and deep body.



**Parma viola** sp. nov.

(Plate xxviii, fig. 2.)

D.xiii/16; A.ii/16; P.i/20; V.i/5; C.13. 22 tubes on L.lat. and about 9 punctured scales. L.tr. 4/1/12.

Head (50 mm.) 3·4 in length to hypural joint (170). Depth of body (94) 1·8, and depth of caudal peduncle (30) 5·7 in same. Eye (11) 2 in interorbital (22) and 4·5 in head.

Upper profile of head roundly convex. Head higher than long and longer than broad. Eye moderate. All opercles entire. Preorbital margin sinuous but not notched and without process. Jaws subequal, lips fleshy. Maxillary not reaching vertical of eye. A single series of small compressed teeth in each jaw. Tongue small. Five branchiostegal rays. Gill-membranes united across isthmus. About eleven short, pointed gill-rakers on the lower limb of the first gill-arch. Head scaly, except on frons, preorbital, chin, and margins of preoperculum where the scales are replaced by numerous large pores. Top of head, sides of nape, and an area behind the preopercular border thickly overlaid with auxiliary scales. Two small patches of minute scales on the median part of the gill-membranes.

Body elongate ovate, compressed, covered with ciliated scales which are largest on the anterior portion of the sides and extend on to all the fins except the ventrals; they form sheaths for the dorsal and anal fins but only extend a little over halfway along the rays. The caudal is scaly almost to the tips of the rays and there are scales on the small membrane between the lobes. Lateral line gently arched, composed of twenty-two tube-bearing scales followed by eight or nine punctured scales on side of caudal peduncle. Most of the tube-bearing scales have irregular outlines, often with median lobes. Intestine long and large, the fish evidently subsisting on seaweeds.

Dorsal originating in advance of pectorals and ventrals, terminating behind anal. Membranes of the spinous portion produced into pencils. Fourth and fifth dorsal spines longest; of the rays, the sixth is longest, reaching to the tip of the pointed lobe of the soft dorsal fin. Anal somewhat similar to soft dorsal but lower and with a rounded margin; eighth and ninth rays longest. Pectorals longer than head. Ventrals pointed, not reaching vent. Caudal lobes rounded, the upper longer.

Colour, after long preservation in alcohol, fairly uniform chocolate-brown with traces of violet tinges on the bases of the pectorals and on parts of the head; from these the specific name is derived.

Described from the unique holotype, a specimen 170 mm. in length to hypural joint, or nearly 9 inches in total length. (Aust. Mus. Regd. No. *I.6611*.)

*Locality*.—Tasmania; received by exchange from the Victoria Museum, Launceston, in 1904.

This novelty is allied to *Parma oligolepis* but differs in being more elongate, having many pores and auxiliary scales on head, longer pectorals and soft dorsal, shorter ventrals, different fin-formulae, less scaly unpaired fins, notchless preorbital, larger eye, and in several minor characters mentioned in the description above. The holotype of *Parma viola* was labelled "*Glyphisodon victoriae*" in the Australian Museum collection, but this identification was incorrect, as reference to Günther's

description<sup>54</sup> and McCulloch & Waite's figure<sup>55</sup> shows a generically separable fish now known as *Actinochromis victoriæ*. *Actinochromis* and *Parma* are evidently closely related genera, however, and may be segregated from the other Pomacentridæ by being placed in a sub-family to be called the Parminæ.

Genus ACTINOCHROMIS Bleeker.

In Jordan's "Classification of Fishes," 1923, p. 218 and footnote no. 442, there is included in the Pomacentridæ the genus "*Actinochromis*. Orthotype *A. lividus*. (Further details lacking.)" This name, which has been overlooked by most ichthyologists and nomenclators, was proposed by Bleeker in his "Mémoire sur les Chromides Marins ou Pomacentroïdes de l'Inde Archipélagique" (Natuurk. Verhand. Holl. Maatsch. Wetensch., 3de Verz. Deel ii, No. 6; Harlem, 1877) which appears to have been issued after the ninth volume of the Atlas Ichthyologique and therefore posthumously. On pages 5-6 of that paper, we read: "Le *Heliastes lividus* Steind. seul semble génériquement distinct par les dents unisériales et obtuses, par le museau et les préorbitaires sans écailles, et par une dorsale à 18 et une anale à 15 ou 16 rayons. On pourrait indiquer ce type sous le nom d'*Acanthochromis*." The last word is evidently a *lapsus calami*, and is not to be confused with the genus *Acanthochromis* Gill. Bleeker corrected his error on page 166 of the same treatise where, in the "Corrigenda et Addenda" is stated "Pag. 6 Lin. 3 loco: *Acanthochromis* lege: *Actinochromis*." It is noted on page 39 of the same paper that *Actinochromis* belongs to the phalanx Glyphidodontini, and on page 42 it is placed in the sub-phalanx Chromidi, "l'*Actinochromis* étant australasien."

The orthotype of *Actinochromis* is *Heliastes lividus* Klunzinger (not of Steindaelner as stated by Bleeker). This species was described from Port Phillip, Victoria, in Weigmann's Archiv. Naturg. xxxviii, 1, 1872, p. 36, but, being conspecific with the earlier *Glyphidodon victoriæ* Günther,<sup>56</sup> must now be known as *Actinochromis victoriæ* (Günther). This species, or one very near it, has been described and figured by McCulloch & Waite<sup>57</sup> from a St. Vincent Gulf specimen. An old skin from Victoria, identified by Castelnau, is the only representative of this species I have seen. The Western Australian specimen noted by Klunzinger<sup>58</sup> is probably a second species of *Actinochromis* requiring description.

Fowler & Bean<sup>59</sup> have listed Bleeker's name as a synonym of *Chromis* Cuvier but this action is not justifiable; "*Chromis lividus* Steindachner" is given by them as genotype.

CHECK-LIST OF AUSTRALIAN SPECIES OF THE ORDER  
AMPHIPRIONIFORMES.

Family AMPHIPRIONIDÆ.

Genus AMPHIPRION Bloch & Schneider.

"*Coracinus*" Gronow, Zoophylacium 1763, p. 66. Non-binomial. Part referring to "*Coracinus fasciis latis obliquis*" &c. only. This species is *Coracinus* seu *Sciæna unimaculata* Meuschen, Index Zoophylac. Gronow, 1781.

<sup>54</sup> Günther, Ann. Mag. Nat. Hist. (3) xi, Feb. 1, 1863, p. 115. Victoria.

<sup>55</sup> McCulloch & Waite, Rec. S. Austr. Mus. i, 1918, p. 46, pl. 11, fig. 2.

<sup>56</sup> Günther, Ann. Mag. Nat. Hist. (3) xi, Feb. 1, 1863, p. 115. Victoria.

<sup>57</sup> McCulloch & Waite, Rec. S. Austr. Mus. i, 1918, p. 46, pl. ii, fig. 2.

<sup>58</sup> Klunzinger, Sitzb. Akad. Wiss. Wien lxxx, 1, 1879, p. 398.

<sup>59</sup> Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 30.

*Amphiprion* Bloch & Schneider, Syst. Ichth. 1801, p. 200. Logotype, *A. ephippium* (Bloch), designated by Griffith, Anim. Kingdom (Cuvier), 1834, p. 160. Not *Amphiprion* Gistel, Naturg. d. Thierr. 1848, p. 108, which is made equivalent to *Anabas* Cuvier (i.e. *Amphiprion* Bl. & Schn., *pars, sed non sensu stricto*).

*Amphiprionum* Bosc, Nouv. Dict. d'Hist. Nat. (nouv. édit.) i, 1816, p. 469. *Idem*, Bory de St. Vincent, Dict. Class. d'Hist. Nat. i. 1822, p. 295. Variant of *Amphiprion*. Logotype, *A. ephippium* (Bloch), by present designation.

*Prochilus* Bleeker, Nat. Tijdschr. Dierk. ii, 1865, p. 360; Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 20; and Atl. Ichth. ix, 1877, on plates. *Ex* Klein, Neuer Schauplatz Natur. i, 1775, p. 1043, non-binomial (*vide* Jordan, Gen. Fish. i, 1917, p. 39 & *ibid.* ii, 1919, p. 168). Logotype, *Amphiprion ephippium* (Bloch), designated by Jordan, 1919. Preoccupied by *Prochilus* Cuvier, Règn. Anim. ed. 1, ii, "1817" = Dec. 1816, p. 294, another genus of fishes<sup>60</sup>; not *Prochilus* Illiger, Syst. Mamm. et Avium, 1811, pp. 109-110 (*vide* Palmer, Index Gen. Mamm., 1904), a genus of mammals. Not *Prochilus* Brullé Hist. Nat. Ins. ix, 1835, p. 134), a genus of insects.

### ***Amphiprion polymnus* (Linnæus).**

*Perca polymna* Linnæus, Syst. Nat., ed. 10, 1758, p. 291; ed. 12, 1766, p. 484. Habitat in Indiis.

*Anthias polymna* Bloch, Nat. Ausl. Fische vi, 1792, p. 103, pl. cccxvi, fig. 1. East Indies.

*Range*.—Queensland; extralimital.

### ***Amphiprion melanopus* Bleeker.**

*Amphiprion melanopus* Bleeker, Nat. Tijdschr. Ned. Ind. iii, 1852, p. 561. Amboina.

*Amphiprion monofasciatus* Thiollière, Ichth. in Montrouzier, Ann. Soc. Imp. d'Agric. &c., Lyons, viii, 1856; Faune Île Woodlark, 1857, p. 198. Woodlark Island.

*Range*.—North Australia<sup>61</sup>; extralimital.

### ***Amphiprion tricolor* Günther.**

*Amphiprion tricolor* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 8. Port Essington. Types in British Museum.

*Amphiprion ruppelii* Castelnau, Proc. Zool. Acclim. Soc. Vict. ii, May 10, 1873, p. 91. Port Darwin. Type in Paris Museum.

*Range*.—North Australia; extralimital.

NOTE.—Fowler & Bean (Bull. U. S. Nat. Mus. 100, vii, 1928, p. 10) note this species from Queensland, a mistake for North Australia.

### ***Amphiprion bicinctus* Rüppell.**

*Amphiprion bicinctus* Rüppell, Atlas zu Rüppell, Reise (Senckenberg Nat. Ges.), Fische, 1830-1831, p. 139, pl. xxv, fig. 1. Tor and Massowah, Red Sea.

*Range*.—Queensland; North Australia; extralimital.

### ***Amphiprion unimaculatus* (Meuschen).**

"*Jourdin*" Renard, Poiss. Moluques, 1718, pl. vii, fig. 49 (*vide* Gronow). Pre-linnean.

"*Coracinus fasciis latis* &c." Gronow, Zoophylacium 1763, p. 66, No. 227. Amboina and India. Non-binomial.

<sup>60</sup> Cloquet (Dict. Sci. Nat., ed. Lovrault, xliii, 1826, p. 342) designates as the type of *Prochilus*, *Sciæna macrolepidota* and *S. maculata* Bloch, plates 298 & 299, allies of *Centropomus*.

<sup>61</sup> The term "North Australia" is here used for the State hitherto generally known as the "Northern Territory" or "Northern Territory of South Australia," and does not include North Queensland and North-western Australia.

*Coracinus* seu *Sciæna unimaculata* Meuschen, Index Zoophyl. Gronow, 1781, Pisces, No. 227. Based on Gronow, 1763.

*Anthias bifasciatus* Bloch, Nat. Ansl. Fische vi, 1792, p. 108, pl. cccxvi, fig. 2. Amboina.

*Lutjanus jourdin* Lacépède, Hist. Nat. Poiss. iv, 1802, pp. 191 & 235. Amboina. Probably derived from "Jourdin" Rénard.

*Coracinus vittatus* Gray, Cat. Fish. coll. Gronow Brit. Mus. 1854, p. 57. Ex Gronow MS. Based on Zoophylacium, No. 227.

*Range*.—Queensland; extralimital.

NOTE.—This species has been generally called *Amphiprion bifasciatus* (Bloch) but Meuschen's name is earlier. Gronow's original name for this species was polynomial but Meuschen gave it the binomial name *Coracinus* s[eu] *Sciæna unimaculata* in his Index to Gronow's Zoophylacium, a work published in 1781 in accordance with the Linnæan system of nomenclature. Meuschen's names have been overlooked by many taxonomists owing to the rarity of his Index, a copy of which is in the Australian Museum library. The molluscan names have been listed by Dall<sup>62</sup> and I am preparing a collation of the fish names with a view to publication at a later date.

***Amphiprion melanostolus* Richardson.**

*Amphiprion melanostolus* Richardson, Ann. Mag. Nat. Hist. ix, July 1, 1842, p. 390. Depuch Island, New Holland (Emery).

*Range*.—North-western Australia.

***Amphiprion rubrocinctus* Richardson.**

*Amphiprion ? rubrocinctus* Richardson, Ann. Mag. Nat. Hist. ix, July 1, 1842, p. 391. Near Depuch Island (Emery).

*Range*.—North-western Australia.

***Amphiprion papuensis* Macleay.**

*Amphiprion papuensis* Macleay, Proc. Linn. Soc. N. S. Wales viii, 3, July 1883, p. 271. D'Entrecasteaux Group. Type in Austr. Mus., Sydney.

*Range*.—Queensland and New Guinea.

***Amphiprion milii* (Bory de St. Vincent).**

*Sparus milii* Bory de Saint Vincent, Diet. Classique d'Hist. Nat. xvii, 1831, p. 130, pl. xciii, fig. 2. Shark's Bay (Milius). Not *Sparus mylio* Lacépède, Hist. Nat. Poiss. iv, 1802, pp. 41 and 131 from Mauritius.

*Range*.—West Australia.

Genus **ACTINICOLA** Fowler.

*Actinicola* Fowler, Journ. Acad. Nat. Sci. Philad. (2) xii, 4, 1904, p. 533. Orthotype, *Lutjanus percula* Lacépède.

***Actinicola percula* (Lacépède).**

*Lutjanus percula* Lacépède, Hist. Nat. Poiss. iv, 1802, p. 239. New Britain.

*Amphiprion tunicatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 399. Vanicolo.

*Amphiprion ocellaris* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 399. Sumatra.

*Amphiprion melanurus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 400. Sumatra.

*Range*.—Queensland; extralimital.

<sup>62</sup> Dall, Nautilus xxxvii, Oct. 1923, pp. 44-52.

**Actinicola bicolor** (Castelnau).

*Amphiprion bicolor* Castelnau, Proc. Zool. Acclim. Soc. Vict. ii, May 10, 1873, p. 92. Port Darwin.  
Type in Paris Museum.

*Range*.—North Australia.

## Family PREMNIIDÆ.

## Genus PREMNAS Cuvier.

*Premnas* Cuvier, Règn. Anim. ed. 1, i, "1817" = Dec. 1816, p. 345. Haplotype, *Chaetodon biaculeatus* Bloch.

**Premnas biaculeatus** (Bloch).

*Chaetodon biaculeatus* Bloch, Nat. Ausl. Fische iv, 1790, p. 11, pl. xxix, fig. 2. East Indies.

*Lutianus trifasciatus* Bloch & Schneider, Syst. Ichth., 1801, p. 568. Based on Koelreuter, Nov. Comm. Acad. Petropol. x, 1763, p. 346, pl. viii, fig. 5. Moluccas.

*Scorpena aculeata* Lacépède, Hist. Nat. Poiss. iii, 1802, p. 268. No locality.

*Holocentrus sonnerati* Lacépède, Hist. Nat. Poiss. iv, 1802, pp. 344 & 391. Mauritius.

*Chaetodon bimaculatus* Desmarest, Dict. Sci. Nat. (Levrault ed.), xliii, 1826, p. 279, pl. xlvii, fig. 2. No loc. *Errone pro C. biaculeatus*, designated type of *Premnas*. Not *Chaetodon bimaculatus* Bloch 1790.

*Premnas leucodesmus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 409. *Ex* Kuhl & van Hasselt MS. Java.

*Premnas semicinctus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 409, pl. cxxxiii, fig. 1. No locality.

*Premnas unicolor* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 410. Based on *Scorpena aculeata* Lacépède 1802.

*Sargus ensifer* Gray, Cat. Fish. coll. Gronow Brit. Mus. 1854, p. 66. Indian Seas.

*Premnas epigrammata* Fowler, Journ. Acad. Nat. Sci. Philad. (2) xii, 1904, p. 532, pl. xix, lower figure to right. Padang, Sumatra.

A series collected by the late Charles Hedley at Green Island, off Cairns, and a specimen from Murray Island found inside a sea-anemone by Mr. Melbourne Ward, are in the Australian Museum. New record for Australia. For further references to this species see Fowler & Bean (Bull. U. S. Nat. Mus. 100, vii, 1928, p. 4); other recent notes have been given by Ahl (Blat. Aquar. Terr. xxxvii, 1926, p. 15).

*Range*.—Queensland; extralimital.

**Premnas gibbosus** Castelnau.

*Premnas gibbosus* Castelnau, Vict. Offic. Rec. Philad. Exhib. (Res. Fish. Austr.), 1875, p. 34. Cape York.

*Range*.—Queensland.

## Family POMACENTRIDÆ, s. str.

## Genus POMACENTRUS Lacépède.

*Pomacentrus* Lacépède, Hist. Nat. Poiss. iv, 1802, pp. 505 & 508. Logotype *P. pavo* Lacépède (= *Chaetodon pavo* Gmelin), fixed by Guichenot, Dict. pittoresque d'Hist. Nat. viii, 1838-1839, p. 502.

*Pristotis* Rüppell, Neue Wirbelth. Abyssin., Fische, 1838, p. 128. Haplotype, *P. cyanostigma* Rüppell, called *cæruleopunctatus* on p. 129.

**Pomacentrus tæniurus** Bleeker.

*Pomacentrus tæniurus* Bleeker, Act. Soc. Sci. Indo-Néerl. (Verh. Natuurk. Vereen. Ned. Ind.), i, 1856, p. 51. Amboina.

*Pomacentrus cyanomos* Bleeker, Nat. Tijdschr. Ned. Ind. xi, 1856, p. 89. Batavia.

*Glyphisodon amboinensis* Bleeker, Act. Soc. Sci. Indo-Néerl. ii, 1857, p. 72. Amboina.

*Pomacentrus leucosphyrus* Fowler, Journ. Acad. Nat. Sci. Philad. (2) xii, 1904, p. 533, pl. xix, lower fig. to left. Padang, Sumatra.

*Range*.—Queensland; extralimital.

Genus **DISCHISTODUS** Gill.

*Dischistodus* Gill, Proc. Acad. Nat. Sci. Philad. xv, 1863, pp. 214 & 219. Orthotype, *Pomacentrus fasciatus* Cuv. & Val.

**Dischistodus fasciatus** (Cuv. & Val.).

*Pomacentrus fasciatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 426, pl. cxxxiv. Java.

*Pomacentrus quadrifasciatus* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 87, in synonymy. *Ex* Kuhl & van Hasselt MS. Java.

*Range*.—Queensland; North Australia; extralimital.

**Dischistodus prosopotænia** (Bleeker).

*Pomacentrus prosopotænia* Bleeker, Nat. Tijdschr. Ned. Ind. iii, 1852, p. 67. Singapore.

*Pomacentrus interorbitalis* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 30. East Indian Archipelago.

*Range*.—Queensland; extralimital.

**Dischistodus frenatus** (De Vis).

*Pomacentrus frenatus* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 874. Cardwell. Type in Queensland Museum.

*Range*.—Queensland.

Genus **PSEUDOPOMACENTRUS** Bleeker.

*Pseudopomacentrus* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 41. Logotype, *Pomacentrus littoralis* Cuv. & Val., designated by Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 65.

**Pseudopomacentrus littoralis** (Cuv. & Val.).

? *Pomacentrus emarginatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 422. Waigiou.

*Pomacentrus littoralis* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 425. *Ex* Kuhl & van Hasselt MS. Java.

? *Pristotis fuscus* Bleeker, Verh. Bat. Gen. xxii, 1849, Bali, p. 9. Bali, E. Indies.

*Pomacentrus hogoleuensis* Hombron & Jacquinot, Voy. Pole Sud. Zool. iii, Poiss., 1853, p. 47, pl. v, fig. 3. Hogoleu, Caroline Is.

*Range*.—Queensland; North Australia; extralimital.

**Pseudopomacentrus macleayi** (Whitley).

*Pomacentrus obscurus* Alleyne & Macleay, Proc. Linn. Soc. N. S. Wales i, 4, 1877, p. 343, pl. xv, fig. 2. (Torres Strait.) Preoccupied by *Pomacentrus obscurus* Thiollière, Ichth. in Montrouzier, Ann. Soc. Imp. d'Agric. &c., Lyons, viii, 1856 (Faune Île Woodlark, 1857), p. 200.

*Pomacentrus macleayi* Whitley, Rec. Austr. Mus. xvi, 4, March 28, 1928, p. 221. New name for *P. obscurus* Alleyne & Macleay, preoccupied.

Range.—Queensland.

***Pseudopomacentrus wardi* (Whitley).**

*Pomacentrus wardi* Whitley, Rec. Austr. Mus. xv, 5, April 6, 1927, p. 301, fig. 1. Heron I., Queensland. Holotype and paratypes in Austr. Mus., Sydney.

Range.—Queensland; North Australia; extralimital.

NOTE.—Records of *Pomacentrus trilineatus* from Australia apparently refer to this species.

***Pseudopomacentrus bilineatus* (Castelnau).**

*Pomacentrus bilineatus* Castelnau, Proc. Zool. Acclim. Soc. Vict. ii, May 10, 1873, p. 89. Port Darwin.

Range.—North Australia.

***Pseudopomacentrus modestus* (Castelnau).**

*Pomacentrus modestus* Castelnau, Vict. Offic. Rec. Philad. Exhib. (Res. Fish. Austr.), 1875, p. 35. Gulf of Carpentaria.

Range.—Queensland.

***Pseudopomacentrus flavicauda* (Whitley).**

*Pomacentrus flavicauda* Whitley, Rec. Austr. Mus. xvi, 6, June 11, 1928, p. 297, fig. 1. North west Islet, Queensland. Type in Austr. Mus., Sydney.

Range.—Queensland; North Australia.

***Pseudopomacentrus fasciatus* (Macleay).**

*Dascyllus fasciatus* Macleay, Proc. Linn. Soc. N. S. Wales ii, 4, June 1878, p. 361, pl. x, fig. 2. Port Darwin. Type in Macleay Mus., University of Sydney.

*Pomacentrus darwiniensis* Whitley, Rec. Austr. Mus. xvi, 6, June 11, 1928, p. 297. New name for *Dascyllus fasciatus* Macleay, regarded as invalidated by *Pomacentrus fasciatus* Cuv. & Val., 1830.

Range.—North Australia.

***Pseudopomacentrus sufflavus* (Whitley).**

*Pomacentrus sufflavus* Whitley, Rec. Austr. Mus. xvi, 1, Oct. 7, 1927, p. 18, pl. i, fig. 3. Michaelmas Cay, N. Queensland. Holotype in Austr. Mus., Sydney.

Range.—Queensland.

***Pseudopomacentrus amboinensis* (Bleeker).**

*Pomacentrus amboinensis* Bleeker, Versl. Akad. Amsterdam (2) ii, 1868, p. 334. Amboina.

NOTE.—Specimens in the Australian Museum from Holbourne Island, off Port Denison, North Queensland, were collected by Mr. E. H. Rainford, and agree excellently with the original description by Bleeker and with the figure published later (Bleeker, Atlas Ichth., ix, 1877, pl. cccvi, fig. 7).

New record for Australia.

Range.—Queensland; extralimital.

**Pseudopomacentrus apicalis** (De Vis).

*Pomacentrus apicalis* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 874. Barrier Reef, Queensland. Type in Queensland Museum.

*Range*.—Queensland.

**Pseudopomacentrus bankanensis** (Bleeker).

*Pomacentrus bankanensis* Bleeker, Nat. Tijdschr. Ned. Ind. xii, 1856, p. 216. Koba, Banka, East Indies. New name for *Pomacentrus tenuiops* Bleeker, Nat. Tijdschr. Ned. Ind. iii, 1852, p. 729. Koba. Not *P. tenuiops* Cuv. & Val., 1830.

*Range*.—North Australia; extralimital.

## Genus BRACHYPOMACENTRUS Bleeker.

*Brachypomacentrus* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 73. Haplotype, *Pomacentrus albifasciatus* Schlegel & Müller.

**Brachypomacentrus albifasciatus** (Schlegel & Müller).

*Pomacentrus albifasciatus* Schlegel & Müller, Verh. Nat. Ges. Ned. overz. bezitt. (Zool.), Pisees, 1844, p. 21. Celebes.

*Range*.—Queensland; extralimital.

## Genus EUPOMACENTRUS Bleeker.

*Eupomacentrus* Bleeker, Arch. Néerl. Sei. Nat. xii, 1877, p. 40 (*vide* Weber & Beaufort, Fish. Indo-Austr. Archip. i, 1911, p. 177); Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 73. Virtual haplotype, *Chatodon lividus* Bloch & Schneider.

**Eupomacentrus nigricans** (Lacépède) var. **subniger** (De Vis).

? *Holocentrus nigricans* Lacépède, Hist. Nat. Poiss. iv, 1802, pp. 332 & 367. Ex "Aspro totus atratus" &c. Commerson MS. No locality (probably Mauritius).

? *Pomacentrus scolopseus* Quoy & Gaimard, Voy. Uranie Physic., Zool., Jan.-Mar. 1825, p. 398. Mauritius.

? *Pomacentrus tenuiops* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 423. Mauritius, &c. *Idem*, Lesson, Voy. Coquille ii, 1830, p. 190, pl. xxviii, fig. 2. Mauritius.

*Pomacentrus subniger* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 873. Cardwell. Type in Queensland Museum.

*Range*.—Queensland; North Australia; extralimital (as *nigricans*).

**Eupomacentrus lividus** (Bloch & Schneider).

*Chatodon lividus* Bloch & Schneider, Syst. Ichth. 1801, p. 235. Pacific Ocean. Ex Forster MS., which was published later in Descr. Anim. maris Australis Terras (Lichtenstein ed.), 1844, p. 227. Near St. Christina I. or Waitabo.

*Pomacentrus punctatus* Quoy & Gaimard, Voy. Uranie Physic., Zool., 1824, pp. 395 & 398, pl. lxiv, fig. 1. Mauritius.

*Pomacentrus prosopotaenioides* Bleeker, Nat. Tijdschr. Ned. Ind. iii, 1852, p. 286. Amboina.

*Pomacentrus vitianus* Sauvage, Bull. Soc. Philomat. Paris (7), iii, 1879, p. 206 (3 of reprint). Fiji.

*Pomacentrus cyanospilos* Bleeker, Nat. Tijdschr. Ned. Ind. iii, 1852, p. 709. Wahai, East Indies.

*Range*.—North Australia; extralimital.



**Eupomacentrus profundus** (De Vis).

*Pomacentrus profundus* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 873. Barrier Reef, Queensland.

*Range*.—Queensland.

NOTE.—I have failed to discover any specimen in the Queensland Museum which may be regarded as the type of this species with certainty.

Genus **DAYA** Bleeker.

*Daya* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 71. Orthotype, *Pomacentrus jerdoni* Day.

**Daya jerdoni** (Day).

*Pomacentrus jerdoni* Day, Proc. Zool. Soc. Lond. 1873, p. 237. Madras, India.

*Pomacentrus doli* Macleay, Proc. Linn. Soc. N. S. Wales vi, 1881, p. 65, pl. i, fig. 1. Port Jackson. Types in the Macleay Museum, University of Sydney.

*Daya jerdoni* var. *fusca* McCulloch, Mem. Qld. Mus. vii, 3, Nov. 4, 1921, p. 171, pl. ix, fig. 2. South Queensland.

*Chromis virescens* Ogilby, Mem. Qld. Mus. vii, 4, Dec. 19, 1922, p. 303, pl. xix, fig. 3. Hervey Bay, S. Queensland. Type in Queensland Museum.

*Range*.—New South Wales ; Queensland ; extralimital.

Genus **PARAPOMACENTRUS** Bleeker.

*Parapomacentrus* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 65. Logotype, *Pomacentrus polynema* Bleeker, designated by Jordan, Gen. Fish. iii, 1919, p. 387.

NOTE.—Though Bleeker intimated that his *Pomacentrus polynema* was typical of this genus when he stated "Le type actuel est fort voisin du genre Pomacentrus," he did not make a formal type-designation.

**Parapomacentrus bankieri** (Richardson).

*Glyphisodon bankieri* Richardson, Rept. 15th Mect. Brit. Assn. Adv. Sci., 1845 (publ. late 1846), p. 253. Hong Kong.

*Glyphisodon nemurus* Bleeker, Nat. Tijdschr. Ned. Ind. xiii, 1857, p. 73. Kajeli and Amboina, East Indies.

*Range*.—Queensland ; extralimital.

Subfamily **GLYPHISODONTINÆ**.Genus **GLYPHISODON** Lacépède.

"*Abu-defduf*" Forskal, Descr. Anim. 1775, p. 59. Vernacular. Haplotype, "*Chætodon sordidus*" Forskal. This work is non-binomial.

*Glyphisodon* Lacépède, Hist. Nat. Poiss. iv, 1802, p. 542. Logotype, *Glyphisodon moucharra* Lacépède = *Chætodon saxatilis* Linnaeus, selected by Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 91.

*Glyphisodon* Duméril, Zool. Analyt. 1806, p. 336, vernac. on p. 134. Genus *caelebs*. Logotype *Chætodon saxatilis* Linnaeus, designated by Fricke, Analyt. Zool. (Duméril, German ed.), 1806, p. 135 as *Glyphisodon*, and p. 336 as *Glyphisodon*.

*Glyphidodon* Agassiz, Nomencl. Zool. 1846, Index Univers. Emendation for *Glyphisodon* Lacépède.

**Glyphisodon cœlestinus** Cuv. & Val.

*Glyphisodon cœlestinus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 464, pl. cxxxv. Mauritius. Name ex *Chatodon cœlestinus* Solander MS. (Ulietea, Society Islands.)

Range.—Queensland; North Australia; extralimital.

NOTE.—Cuvier & Valenciennes' account indicates that Mauritius is the type-locality of this species, which is evidently distinct from *G. sexfasciatus* (Lacépède).

**Glyphisodon palmeri** Ogilby.

*Glyphisodon palmeri* Ogilby, Mem. Qld. Mus. ii, Dec. 10, 1913, p. 87, pl. xxii, fig. 2. Moreton Bay, Queensland. Types in Queensland Museum.

Range.—Queensland.

**Glyphisodon sexfasciatus** (Lacépède).

*Labrus sexfasciatus* Lacépède, Hist. Nat. Poiss. iii, 1802, pp. 430 & 477, pl. xix, fig. 2. "Le grand golfe de l'Inde."

A specimen in the Queensland Museum (No. I. 2551) from Cape York. New record for Australia.

Range.—Queensland; extralimital.

**Glyphisodon saxatilis** (Linnæus).

"*Sparus fasciis quinque transversis, subfuscis*" Balk, Mus. Adolpho-Fridericianum (Linnæus), May 1746, p. 34. Pre-Linnean polynomial.

*Chatodon saxatilis* Linnæus, Syst. Nat., ed. 10, 1758, p. 276; ed. 12, 1766, p. 466. Based on Mus. Ad. Fr. i, p. 64; Amœn. Acad. i, p. 312; & Gronow, Mus. I. No. 89. "India."

*Glyphisodon waigiensis* Quoy & Gaimard, Voy. Uranie Physic., Zool., Jan.-March 1825, p. 391. "Îles des Papous" = Waigiou.

*Glyphisodon waigiensis* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 457. Waigiou.

Range.—New South Wales; Queensland; extralimital.

**Glyphisodon septemfasciatus** Cuv. & Val.

*Glyphisodon septemfasciatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 463. Mauritius.

Range.—Queensland; North-western Australia; extralimital.

**Glyphisodon sordidus** (Bonnaterre).

"*Chatodon sordidus*" Forskal, Deser. Anim. 1775, p. 62. Red Sea. Non-binomial work.

*Chatodon* [sic] *sordidus* Bonnaterre, Tabl. Encycl. Meth. Ichth., 1788, p. 90. Ex Forskal. Red Sea.

Range.—Queensland; extralimital.

**Glyphisodon expansus** De Vis.

*Glyphisodon expansus* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 875. Barrier Reef, Queensland.

Range.—Queensland.

NOTE.—The type of this species appears to have been lost, as I was unable to find it when examining the Queensland Museum collection.

**Glyphisodon luteocaudatus** Saville-Kent.

*Glyphisodon luteo-caudata* Saville-Kent, Great Barrier Reef of Australia, 1893, p. 308, chromo-pl. xvi, fig. 11. Queensland.

Range.—Queensland.

NOTE.—Not recognised since first named.

Genus **AMBLYGLYPHIDODON** Bleeker.

*Amblyglyphidodon* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 92. Orthotype, *Glyphisodon aureus* Cuv. & Val.

**Amblyglyphidodon curacao** (Bloeh).

*Chetodon curacao* Bloch, Nat. Ausl. Fische iii, 1787, p. 106, pl. ccxii, fig. 1. "Curaçao"=East Indies.

Mr. E. H. Rainford has collected this species for the Australian Museum at Port Denison and Hook Island, Whitsunday Passage, Queensland. New record for Australia. He noted the colours as "Back dark green. Belly silvery. Iris yellow, smudged with black. Dorsal, anal, and caudal whitish."

Range.—Queensland; extralimital.

Genus **NEGOSTEGASTES** Whitley.

*Negostegastes* Whitley, *gen. nov.*, *supra*, pp. 210 & 225. Orthotype, *Glyphisodon leucozona* Bleeker.

**Negostegastes leucozona** (Bleeker).

*Glyphisodon leucozona* Bleeker, Nat. Tijdschr. Ned. Ind. xix, 1859, p. 338. Karangbollong, Java.

Range.—New South Wales; extralimital.

NOTE.—Only known from Australian waters from a small specimen in the Australian Museum. It agrees fairly well with Bleeker's figure (Atl. Ichth. ix, 1877, pl. eceevii, fig. 2), but further specimens are desirable before the identification can be regarded as satisfactory.

Genus **PARAGLYPHIDODON** Bleeker.

*Paraglyphidodon* Bleeker, Versl. Akad. Amsterdam xii, 1876, p. 38. Type, *P. oxycephalus* Bleeker (*vide* Jordan, Gen. Fish. iii, 1919, p. 384). Paper not seen by me.

*Paraglyphidodon* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 116. Logotype, *P. oxycephalus* Bleeker, designated by Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 122.

**Paraglyphidodon melas** (Cuv. & Val.).

*Glyphisodon melas* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 472. *Ex* Kuhl & van Hasselt MS. Java.

*Glyphisodon ater* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 473. *Ex* Ehrenberg MS. Massowah, Red Sea.

Range.—Queensland; extralimital.

**Paraglyphidodon melanopus** (Bleeker).

*Glyphisodon melanopus* Bleeker, Nat. Tijdschr. Ned. Ind. xi, 1856, p. 82. Ora Malang, South-east Java.

Range.—Queensland; extralimital.

## Genus GLYPHIDODONTOPS Bleeker.

*Glyphidodontops* Bleeker, Arch. Néerl. Sci. Nat. xii, 1877, p. 41. Orthotype, *Glyphisodon antjerius* Cuv. & Val. (*vide* Jordan, Gen. Fish. iii, 1919, p. 387).

***Glyphidodontops amabilis* (De Vis).**

*Glyphidodon amabilis* De Vis, Proc. Linn. Soc. N. S. Wales viii, 4, Feb. 21, 1884, p. 452. South Sea Islands.

*Range*.—Queensland ; extralimital.

***Glyphidodontops unimaculatus* (Cuv. & Val.).**

*Glyphisodon unimaculatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 478. Timor.

*Range*.—Queensland ; extralimital.

***Glyphidodontops zonatus* (Cuv. & Val.).**

*Glyphisodon zonatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 483. New Guinea.

*Glyphisodon rossii* Bleeker, Nat. Tijdschr. Ned. Ind. vii, 1854, p. 48. Nova Selma, Kokos Is., East Indies.

*Glyphodon albocinctus* Kner, Sitzb. Akad. Wiss. Wien lvi, 1867, pl. iv, fig. 2. No locality (*vide* Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 179).

*Glyphisodon cingulatus* Kner, Sitzb. Akad. Wiss. Wien lvi, 1867, p. 725. Samoa (*vide* Fowler & Bean, loc. cit.).

*Range*.—Queensland ; extralimital.

## Genus IREDALEICHTHYS Whitley.

*Iredaleichthys* Whitley, Rec. Austr. Mus. xvi, 6, June 11, 1928, p. 296. New name for *Chrysiptera* Swainson, preocc. Orthotype, *C. azurea* Swainson = *Glyphisodon cyaneus* Quoy & Gaimard.

NOTE.—This genus is discussed in detail in this paper, *supra*, p. 226.

***Iredaleichthys hedleyi* (Whitley).**

*Glyphisodon hedleyi* Whitley, Rec. Austr. Mus. xvi, 1, Oct. 7, 1927, p. 20, pl. i, fig. 5. Port Moresby, Papua. Holotype in Austr. Mus., Sydney.

*Range*.—Queensland and New Guinea.

***Iredaleichthys modestus* (Schlegel & Müller).**

*Glyphisodon modestus* Schlegel & Müller, Verh. Nat. Ges. Ned. overz. bezitt. Zool. (Pisc.) 1844, p. 23, pl. vi, fig. 2. Java.

*Glijphisodon phaiosoma* Bleeker, Verh. Bat. Genootsch. xxii, 1849, p. 9. Bali.

*Range*.—Queensland ; extralimital.

NOTE.—This species is regarded as a synonym of *Glyphisodon glaucus* Cuv. & Val. (Hist. Nat. Poiss. v, July 1830, p. 475, Guam) by Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 169.

***Iredaleichthys uniocellatus* (Quoy & Gaimard).**

*Glyphisodon uniocellatus* Quoy & Gaimard, Voy. Uranie Physic., Zool., Jan.-March 1825, p. 393, pl. lxiv, fig. 4. Coupang, Timor and Marianne Is.

*Chrysiptera gamardi* Swainson, Nat. Hist. Classif. Fish. Amphib. Rept. ii, July 1839, p. 216. Based on Quoy & Gaimard's figure of *G. uniocellatus*.

*Range*.—New South Wales ; Queensland ; extralimital.

## Subfamily PARMINÆ.

## Genus ACTINOCROMIS Bleeker.

*Acanthochromis* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, p. 6. Orthotype, *Heliastes lividus* Steindachner (i.e. Klunzinger) = *Glyphidodon victoriae* Günther. Error for *Actinochromis* Bleeker; not *Acanthochromis* Gill 1863.

*Actinochromis* Bleeker, Natuurk. Verh. Holl. Maatsch. Wetensch. (3) ii, 6, 1877, pp. 39, 142, & 166. Emendation for *Acanthochromis* Bleeker (non Gill).

NOTE.—For discussion on this genus, *vide supra*, p. 232.

**Actinochromis victoriae** (Günther).

*Glyphidodon victoriae* Günther, Ann. Mag. Nat. Hist. (3) xi, Feb. 1, 1863, p. 115. Victoria. Type in British Museum.

*Heliastes lividus* Klunzinger, Arch. Naturg. (Wiegmann), xxxviii, 1, 1872, p. 36. Port Phillip, Victoria.

Range.—Victoria, South Australia; Tasmania; West Australia?

## Genus PARMA Günther.

*Parma* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 57. Logotype, *P. microlepis* Günther, designated by Jordan, Gen. Fish. iii, 1919, p. 318.

**Parma microlepis** Günther.

*Parma microlepis* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 57. Port Jackson. Type in British Museum.

*Parma squammipinnis* Günther, Cat. Fish. Brit. Mus. iv, 1862, pp. 58 & 505. "Australia" and Port Jackson. Type in British Museum.

*Glyphidodon (Parma) australis* Steindachner, Sitzb. Akad. Wiss. Wien lvi, 1, 1867, p. 328. No locality = Port Jackson.

Range.—Victoria; New South Wales; South Australia.

**Parma unifasciatus** (Steindachner).

*Pomacentrus unifasciatus* Steindachner, Sitzb. Akad. Wiss. Wien lvi, 1, 1867, p. 326. No locality = New South Wales. Preoccupies *P. unifasciatus* Kner 1868 from Fiji, which is a synonym of *Pelochromis xanthosoma* (Bleeker).

Range.—New South Wales.

**Parma oligolepis** Whitley.

*Parma oligolepis* Whitley, *sp. nov.*, *supra*, p. 230.

Range.—Queensland.

**Parma viola** Whitley.

*Parma viola* Whitley, *sp. nov.*, *supra*, p. 231.

Range.—Tasmania.

**Parma mccullochi** Whitley.

*Parma mccullochi* Whitley, *sp. nov.*, *supra*, p. 228.

Range.—West Australia.

## Family CHROMIDÆ.

## Genus MECÆNICHTHYS Whitley.

*Mecænichthys* Whitley, *gen. nov., supra*, p. 218. Orthotype, *Heliastes immaculatus* Ogilby.

***Mecænichthys immaculatus* (Ogilby).**

*Heliastes immaculatus* Ogilby, Proc. Linn. Soc. N. S. Wales x, 3, "1886" = Dec. 21, 1885, p. 446. Shark Reef, Port Jackson. Type in Austr. Mus., Sydney.

*Range*.—New South Wales; Southern Queensland.

## Genus CHROMIS Cuvier.

*Chromis* Cuvier, Bull. Soc. Sci. Philom. Paris, Oct. 1814, p. 88 (*fide* Sherborn, Index Animalium). Not *Chromis* Plumier 1803, non-binomial (*fide* Sherborn) and not *Cromis* Browne 1789, non-binom. Preoccupies *Chromis* Hübner 1820, a genus of insects, and *Chromis* Gray, Cat. Fish. coll. Gronow Brit. Mus., 1854, p. 149, a genus of Poinatomid fishes. Type by tautonymy *Sparus chromis* Linnaeus.

"*Les Heliases*" Cuvier, Règn. Anim. ed. 2, ii, April 1829, p. 180. Vernacular.

*Heliases* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 494. Logotype, *H. insolatus*, figd. on pl. cxxxvii; designated by Valenciennes, Dict. Univ. d'Hist. Nat. vi, 1845 (reissue, 1861), p. 503. - *Idem*, Voigt, Das Thierreich (Cuvier) ii, 1832, p. 247.

*Heliastes* Griffith, Anim. Kingd. (Cuvier), x, 1834, p. 161. *Ex* Cuvier, *vernac.*

*Heliastes* Lowe, Trans. Zool. Soc. Lond., June 1839, p. 177, and Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 60. *Emend. pro. Heliases* Cuv. & Val.

*Heliastes* Valenciennes in Webb & Berthelot Hist. Nat. Îles Canaries (Ichth.), 1843, p. 27 (*fide* Sherborn, Index Animalium).

NOTE.—I regard as probably distinct from *Chromis*, the following nominal genera:—*Hoplochromis* Fowler, *Ayresia* Cooper, *Furcaria* Poey = *Demoisellea* Whitley, and *Onychognathus* Troschel = *Agripopa* Whitley. For references to literature on these, see Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 30, and Whitley, Rec. Austr. Mus. xvi, 6, 1928, pp. 295-297.

***Chromis nitidus* (Whitley).**

*Tetradrachmum nitidum* Whitley, Rec. Austr. Mus. xvi, 4, March 28, 1928, p. 219, pl. xvii, fig. 3. Hayman I., Queensland. Type in Austr. Mus., Sydney.

*Range*.—Queensland.

NOTE.—One from Hervey Bay in the Queensland Museum; Regd. No. I. 3481.

***Chromis hypsilepis* (Günther).**

*Heliastes hypsilepis* Günther, Ann. Mag. Nat. Hist. (3) xx, July 1, 1867, p. 66. New South Wales. Type in British Museum.

*Range*.—New South Wales.

NOTE.—Allied to *Chromis dispilus* Griffin (Trans. N. Z. Inst., liv, Dec. 14, 1923, p. 254, pl. xxv), in which the males are said to be less deep-bodied than the females.

***Chromis klunzingeri* sp. nov.**

*Heliastes hypsilepis* Klunzinger, Sitzb. Akad. Wiss. Wien lxxx, 1, 1879, p. 398. Not *H. hypsilepis* Günther 1867. King George's Sound, W. Australia.

*Range*.—West Australia.

**Chromis scotochilopterus** Fowler.

*Chromis scotochilopterus* Fowler, Proc. Acad. Nat. Sci. Philad. lxx, 1, 1918, p. 61, fig. 24. Philippine Is. Spelt *C. xotochilopterus* in Zool. Rec.

Range.—Queensland; extralimital.

Genus **HOPLOCHROMIS** Fowler.

*Hoplochromis* Fowler, Proc. Acad. Nat. Sci. Philad. lxx, 1, 1918, p. 66. Orthotype, *Heliases cœruleus* Cuv. & Val.

**Hoplochromis cœruleus** (Cuv. & Val.).

*Heliases cœruleus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 497. New Guinea & Ulea.

*Heliases lepisurus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 498. New Guinea.

*Heliases frenatus* Cuv. & Val., Hist. Nat. Poiss. v, July 1830, p. 498. Guam.

*Heliastes lepidurus* Günther, Cat. Fish. Brit. Mus. iv, 1862, p. 63. Emendation.

*Glyphisodon bandanensis* Bleeker, Nat. Tijdschr. Ned. Ind. ii, 1851, p. 248. Neira, Banda.

Range.—Queensland; extralimital.

Genus **TETRADRACHMUM** Cantor.

*Dascyllus* Cuvier, Règn. Anim. ed. 2, ii, April 1829, p. 179. Haplotype, *Chaetodon aruanus* Linnaeus. Preoccupied by *Dascyllus* Latreille, 1796, and Berthold, 1827, a genus of Coleoptera, emended to *Dascyllus* by Agassiz 1846 (*vide* Sherborn, Index Animalium). *Idem*, Gerbe. Dict. univ. d'Hist. Nat. iv, 1844 (reissue, 1861), p. 608: "Cuvier aurait dû écrire *Dascille*."

*Pyrene* Gistel, Naturg. d. Thierr. höhere Schulen, 1848, p. ix. New name for *Dascyllus* Cuv. & Val., 1830 (= Cuvier 1829), preocc., but itself preoccupied by *Pyrene* Bolten, Mus. Bolten. (2), 1798, p. 134, a genus of molluses. Type, *Chaetodon aruanus* Linn.

*Tetradrachmum* Cantor, Journ. Roy. Asiat. Soc. Bengal xviii, 2, 1849, p. 1222: Cat. Malay. Fish. 1850, p. 240. Substitute for *Dascyllus* Cuv., preocc. Virtual haplotype, *Chaetodon aruanus* Linnaeus.

*Dascyllus* Gray, Cat. Fish. coll. Gronow Brit. Mus., 1854, p. 171, spelt *Dascellus* in index, p. 196. Species not named *Chaetodon aruanus* Linnaeus, haplotype. *Dascillus* Gray, a slightly earlier variant, was given by Fowler & Bean (Bull. U. S. Nat. Mus. 100, vii, 1928, p. 13) but I have not been able to confirm this.

**Tetradrachmum aruanum** (Linnaeus).

*Chaetodon aruanus* Linnaeus, Syst. Nat., ed. 10, 1758, p. 275; ed. 12, 1766, p. 464. Based on "Mus. Ad. Fr. i, p. 63, t. 33, f. 8," which I have not seen. "Habitat in Indiis" [= Aru Islands]. Not in Balk, Museum Adolpho-Fridericianum, 1746.

*Chaetodon arcuanus* Gmelin, Syst. Nat. (Linnaeus), ed. 13, i, 3 (before Nov. 20) 1789, p. 1250. Revival of a name used by Linnaeus before 1758.

"*Pimeleptère ? simunad*" Thiollière, Ichth. in Montrouzier, Ann. Soc. Imp. d'Agric., Lyons, viii, 1856 (Faune Île Woodlark, 1857), p. 199. *Ex* Montrouzier MS., vernacular. Woodlark Island.

*Dascyllus blochii* Castelnau, Vict. Offic. Rec. Philad. Exhib. (Res. Fish. Austr.), 1875, p. 34. Queensland.

Range.—Queensland; extralimital.

NOTE.—Fowler (Proc. Acad. Nat. Sci. Philad. 1907 (1908), p. 433) has wrongly recorded this species from Victoria but his specimen came from Fiji.

## Genus PELLOCHROMIS Fowler &amp; Bean.

*Pellochromis* Fowler & Bean, Bull. U. S. Nat. Mus. 100, vii, 1928, p. 13. Orthotype, *Pomacentrus trimaculatus* Rüppell.

***Pellochromis xanthosoma* (Bleeker).**

*Dascyllus xanthosoma* Bleeker, Nat. Tijdschr. Ned. Ind. ii, 1851, p. 247. Banda.

Range.—Queensland; extralimital.

***Pellochromis trimaculatus* (Rüppell).**

*Pomacentrus trimaculatus* Rüppell, Atlas zu Rüppell, Reise (Sneckenb. Nat. Ges.), Fische, 1829, p. 39, pl. viii, fig. 3. Massowah, Red Sea.

Range.—Queensland; extralimital.

## Genus ACANTHOCHROMIS Gill.

*Acanthochromis* Gill, Proc. Acad. Nat. Sci. Philad. xv, 1863, p. 214. Orthotype, *Dascyllus polyacanthus* Bleeker.

*Heptadecanthus* Alleyne & Macleay, Proc. Linn. Soc. N. S. Wales i, 4, March 1877, p. 343. Haplo-type, *H. longicaudis* Alleyne & Macleay. Mis-spelt *Heptadecacanthus* in the Zool. Rec., and by authors.

***Acanthochromis longicaudis* (Alleyne & Macleay).**

*Heptadecanthus longicaudis* Alleyne & Macleay, Proc. Linn. Soc. N. S. Wales, i, 4, March 1877, p. 343, pl. xv, fig. 3. Cape Grenville.

Range.—Queensland.

***Acanthochromis maculosus* (De Vis).**

*Heptadecanthus maculosus* De Vis, Proc. Linn. Soc. N. S. Wales ix, [4, March 4, 1885, p. 873. Cardwell. Type in Queensland Museum.

Range.—Queensland.

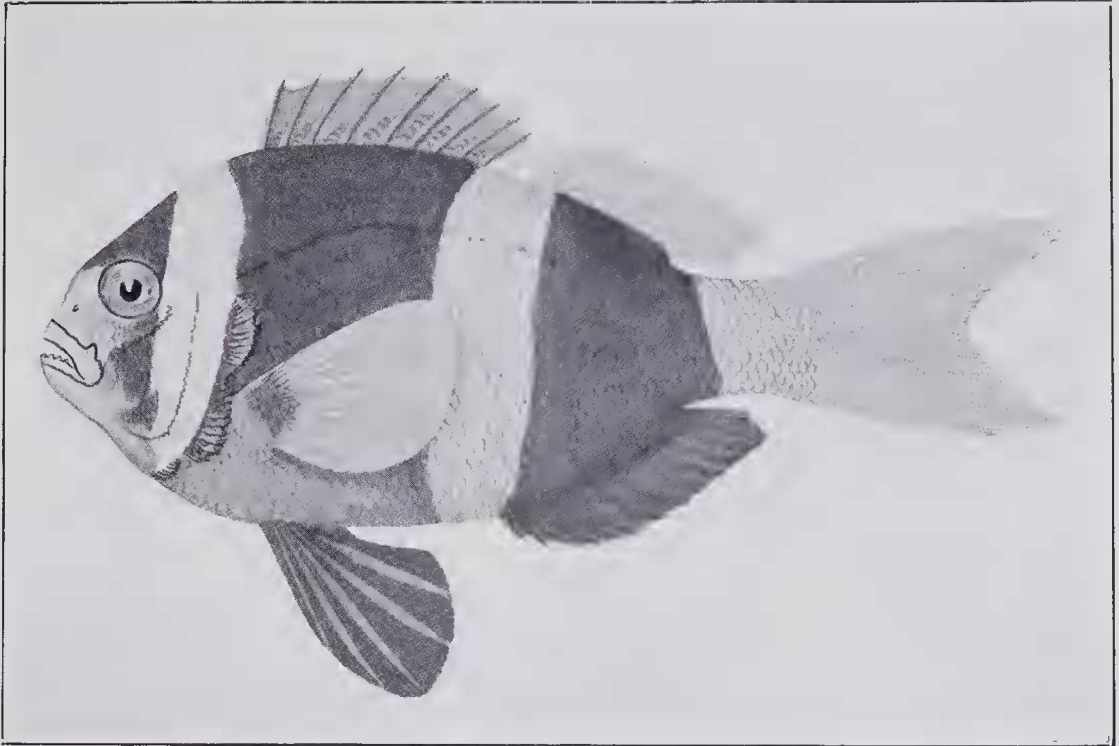
***Acanthochromis brevipinnis* (De Vis).**

*Heptadecanthus brevipinnis* De Vis, Proc. Linn. Soc. N. S. Wales ix, 4, March 4, 1885, p. 872. Queensland coast. Type in Queensland Museum.

Range.—Queensland.

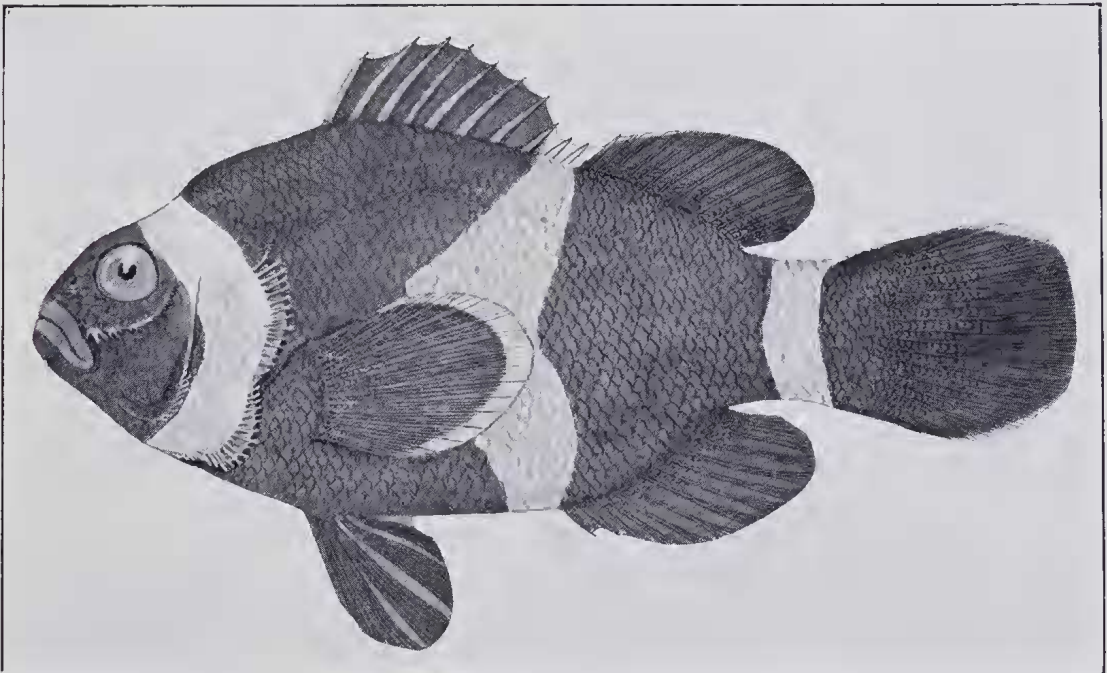
The following new names have been proposed in this paper:—Generic: *Mecanichthys*, *Negostegastes*, and *Phalerebus*. Specific: *Amphiprion mccullochi*, *Chromis klunzingeri*, *Eupomacentrus paschalis*, *Parma mccullochi*, *Parma oligolepis*, and *Parma viola*.





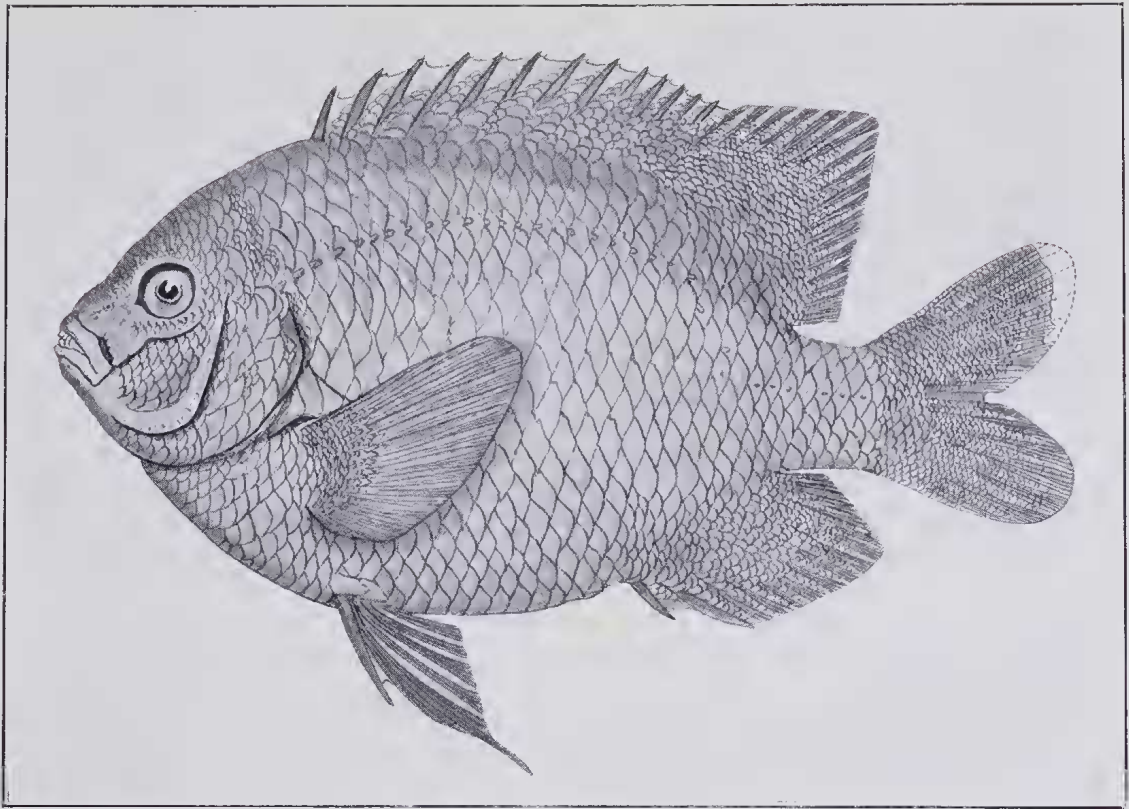
*G. P. Whitley, del.*

Fig. 1.—*AMPHIPRION PAPUENSIS* Macleay.  
D'Entrecasteaux Is. Holotype. *Austr. Mus. No. I. 3240.*



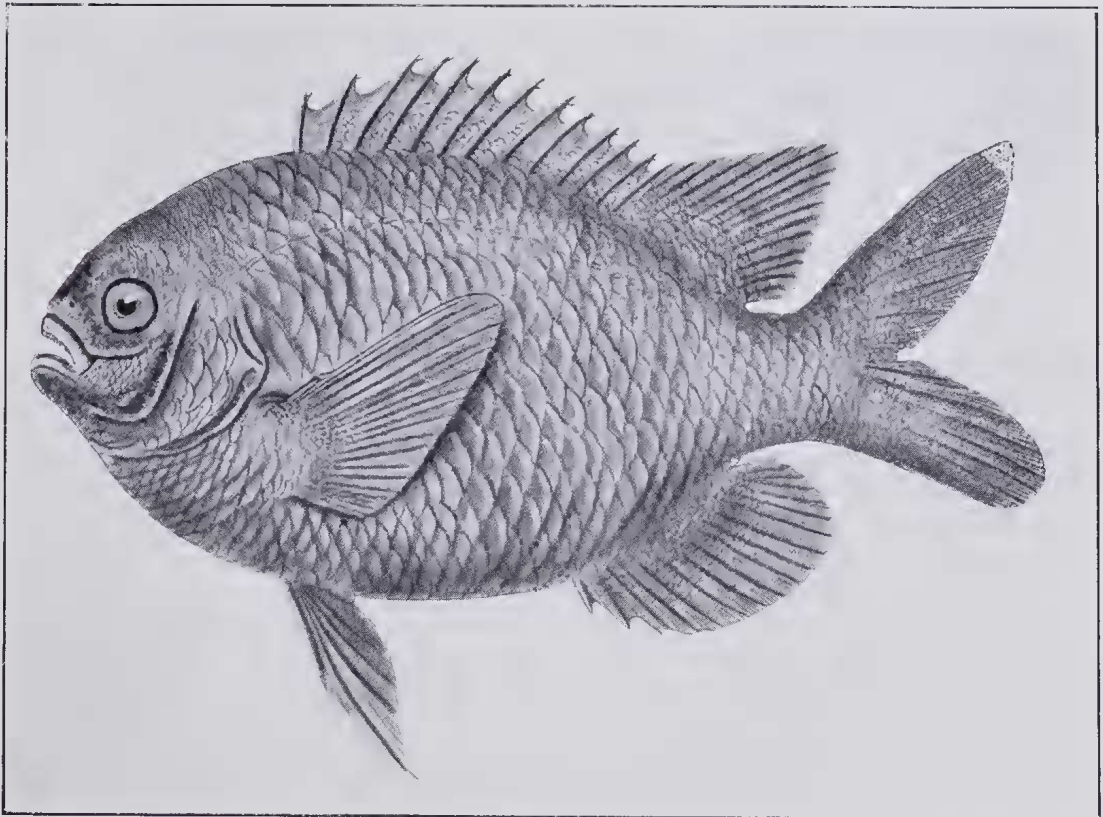
*G. P. Whitley, del.*

Fig. 2.—*ACTINICOLA BICOLOR* (Castelnau).  
Port Darwin. *Austr. Mus. No. A. 4831.*



*G. P. Whitley, del.*

Fig. 1.—*PARMA OLIGOLEPIS* Whitley.  
Holotype; Qld. Mus. No. 1,2536. Cape Moreton, Q.



*Joyce K. Allan, del.*

Fig. 2.—*PARMA VIOLA* Whitley.  
Holotype; Austr. Mus. No. 1,6611. Tasmania.